99TH CONGRESS
2d Session

SENATE

REPORT
99-310

PRICE-ANDERSON ACT AMENDMENTS ACT OF 1986

MAY 21 (legislative day, MAY 19), 1986.—Ordered to be printed

Mr. MCCLURE, from the Committee on Energy and Natural Resources, submitted the following

REPORT

together with

ADDITIONAL AND MINORITY VIEWS

[To accompany S. 1225]

The Committee on Energy and Natural Resources, to which was referred the bill (S. 1225) to amend the Atomic Energy Act of 1954, as amended, to establish a comprehensive, equitable, reliable, and efficient mechanism for full compensation of the public in the event of an accident resulting from activities undertaken under contract with the Department of Energy or activities undertaken by Nuclear Regulatory Commission licensees involving nuclear materials, having considered the same, reports favorably thereon with an amendment in the nature of a substitute and recommends that the bill as amended do pass.

I. PURPOSE OF MEASURE

The purpose of the bill, as reported by the Committee on Energy and Natural Resources, is to renew and amend the Price-Anderson Act (section 170 of the Atomic Energy Act), which provides public liability coverage for licensees of the Nuclear Regulatory Commission and contractors of the Department of Energy. The bill would reauthorize the Price-Anderson indemnification system for 25 years, increase the amount of funds readily available to compensate victims of a nuclear incident, establish an expedited mechanism for congressional action on additional compensation measures if needed, and broaden the scope of the public compensation system to include nuclear waste disposal activities and nuclear incidents involving theft of nuclear materials.

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II. Summary of Major Provisions of Committee Amendment

Section 2 states the congressional findings and purposes regarding renewal of and amendments to the Price-Anderson Act. Including in this section is a new finding acknowledging the Federal Government's responsibility to provide full compensation to the public for all damage and injuries arising out of a nuclear incident relating to Federal activities involving radioactive waste.

Section 3 increases the amount of financial protection required of NRC commercial reactor licensees by a factor of three to four over current levels. It does so by retaining the present requirement that each utility purchase the maximum amount of private insurance coverage available, and by requiring the NRC to increase the maximum amount of deferred premium charged each licensee following a nuclear incident from the current $5 milion to an amount not less than $15 million nor more than $20 million per reactor, with an annual adjustment to account for inflation. In the event of a serious accident resulting in public liability claims, the insurance coverage together with the premium payments by the industry could provide up to approximately $2.5 billion in compensation.

Section 4 expands and extends the liability coverage for DOE contractors. The level of coverage is increased from the current level of $500 million to a level equivalent to the total amount of financial protection required of NRC commercial reactor licensees. As the aggregate amount of protection required of NRC licensees increases due to inflation adjustments or the licensing of new plants, the DOE contractor liability coverage would increase an equivalent amount. In addition, DOE is directed to indemnify its contractors through the year 2012 for all activities under risk of public liability resulting from nuclear incidents.

This section also clarifies the application of the Price-Anderson indemnification system to all Federal activities associated with radioactive waste. The Nuclear Waste Fund would be used for payment of liability claims arising from activities carried out under the Nuclear Waste Policy Act.

In addition, this section provides that the Department of Energy, through indemnification agreements entered into with DOE contractors, would be responsible for the reimbursement of the costs of any precautionary evacuation ordered by a State or local official in response to an emergency involving DOE nuclear-related facilities or activities, provided that the evacuation decision is found to have been reasonable.

Section 4 also grants to the Secretary of Energy the authority to impose civil penalties up to $10 million on contractors, subcontractors, or suppliers if the Secretary, in his discretion, determines that gross negligence or willful misconduct by such contractor, subcontractor or supplier caused a nuclear incident. The Secretary would assess any such penalties in an amount that reflects the degree to which the contractor's negligence or willful misconduct contributed to the damage and injuries.

Section 5 increases the aggregate liability for a single nuclear incident for both NRC licensees and DOE contractors to a level equal to the maximum aggregate financial protection required of NRC licensees. In the event that claims exceed this amount, Congress

would be required to consider the appropriate measures to be taken in order to provide additional fund for full compensation.

Section 6 establishes a new system under section 701 i. of the Atomic Energy Act under which the Congress would review a nuclear incident in the event that additional compensation funds were required. Based on NRC or DOE assessments of the incident, the President would prepare and submit to Congress one or more compensation plans, each of which would be structured to provide full compensation in an equitable and efficient manner for all valid claims. The Congress would consider and act on those plans, within sixty days of their submittal, under expedited procedures.

Section 7 extends the waiver-of-defenses feature of the Price-Anderson Act to include radioactive waste activities and nuclear materials licensees. This feature would trigger the use of strict liability standards in any lawsuit involving a serious nuclear incident that the NRC or the DOE determines is an "extraordinary nuclear occurrence."

This section also provides that a claimant could file suit at any time after an incident, provided that he files within 3 years of the time he discovered or reasonably should have discovered his injury or damage.

Section 8 extends the Price-Anderson Act indemnification authority for 25 years, through August 1, 2012.

Section 9 adds three new definitions to the Atomic Energy Act, and it also amends several existing definitions, including the definition of "nuclear incident." This definition has been broadened to include precautionary evacuations.

Section 12 requires the NRC and DOE to submit reports to the Congress 4 years before the next expiration of the Price-Anderson Act. The reports would evaluate the need to continue or modify the Price-Anderson system, in light of relevant issues that would have developed at that time.

Section 16 extends coverage of the Act to include any nuclear incident caused by exposure to nuclear material that had been illegally diverted from its intended place of confinement.

Section 17 prohibits courts from awarding punitive damages under State law in any action that involves a nuclear incident and that has been brought against a person indemnified by the Federal Government pursuant to the Price-Anderson Act.

III. Background and Need

BACKGROUND

The Price-Anderson Act was originally enacted in 1957 as an amendment to the Atomic Energy Act of 1954. The statute had two main objectives: To ensure that the public would be compensated if an accident occurred at a nuclear facility, and to set a limit on the liability of private industry in order to remove a major deterrent to private participation in the development of nuclear energy.

The need for mandatory, universal coverage for nuclear accidents arose from the fact that the private insurance then available was insufficient ($60 million in 1957) to cover the unknown, yet potentially severe damage and personal injuries that could result

from nuclear accidents. Without this coverage, it was unlikely that the public would ever receive adequate compensation in the event of a severe nuclear accident.

From a utility perspective, although the risk of a serious accident was generally considered of extremely low probability, the financial consequences of such an accident were considered to be sufficiently severe to justify the conclusion that the utilities could not accept such exposure without some limitation on their potential liability.

(1) Original provisions of the Price-Anderson Act (1957)

The Act as originally passed in 1957 provided to commercial nuclear licensees a $560 million limit on liability, consisting of the maximum amount ($60 million) of private insurance available and $500 million of Government indemnity. With respect to contractor-operated activities of the Atomic Energy Commission (now the Department of Energy), the Federal Government indemnified the contractor for $500 million. It is important to note that, in the case of either licensees or contractors, the liability insurance was and still is "omnibus" in nature, in that the utility or contractor accepts full liability for any claims against itself or any subcontractor or supplier involved in the accident. This "omnibus" feature permits a more unified and efficient approach to the processing and settlement of claims.

The Act also provided that in the event that an accident results in damages exceeding the liability limits ($560 million for commercial reactors, $500 million for DOE contractors), "the Congress will thoroughly review the particular incident and will take whatever action is deemed necessary and appropriate to protect the public from the consequences of a disaster of such magnitude."

(2) 1966 renewal

When the Act came up for renewal in 1966, a far-reaching change was made in the statutory scheme—the addition of a provision relating to what we now refer to as an Extraordinary Nuclear Occurrence (ENO). In the event of an ENO, which is defined as "an event resulting in substantial offsite release of radiation and likely to result in significant personal injury or damage to property," the licensee or contractor is required to waive traditional defenses of State tort laws, in order to facilitate recovery by plaintiffs. The amendment concerning the ENO set a minimum statute of limitations of 40 years. This allowed suits to be instituted during a 10 year period after the incident, thus superseding more restrictive State statutes of limitations, but not superseding longer State statutes of limitations.

Another significant amendment adopted in 1966 enhanced the insurance pool's ability to make emergency assistance payments following a nuclear incident. This amendment provided that the NRC and other indemnitors could make payments for immediate assistance from available funds, and that such payments could be made without securing releases and would not constitute an admission of liability of any person indemnified. It was this provision that allowed for immediate payments totaling $1.3 million for emergency assistance, which included the reimbursement of living expenses

and lost wages, to those residents in the Three Mile Island vicinity who temporarily relocated after the 1979 accident at Unit 2 of the Three Mile Island nuclear powerplant.

(3) 1975 renewal (and current version of the Act)

Major modifications were again made in the Act when it came up for its second 10-year renewal in 1977. At that time, a provision was added to phase out Federal Government indemnity of NRC licensees. This was accomplished by the establishment of a retrospective premium assessment, whereby in the event of an accident that was likely to exceed the coverage available under the first tier of private insurance, each NRC licensee would be assessed an amount up to $5 million representing a pro-rated share of the damages in excess of the first tier. This provision not ony allowed for a gradual phase-out of Government indemnification of NRC licensees, but it also allowed for the gradual increase in the liability limit by permitting the limitation to rise as more plants receive operating licenses. Thus, with the $160 million worth of insurance available today and with 100 reactors currently licensed, the Federal Government no longer has indemnification responsibilities for licensees, and the sum of the first and second tiers of insurance now totals $660 million.

In addition to the retrospective premium provisions, other amendments were added in 1977 to strengthen the Extraordinary Nuclear Occurrence provisions for accidents involving either NRC licensees or DOE contractors. The amendments included increasing the statute of limitations from 10 to 20 years, and establishing a mechanism to prioritize claims and classes of claims as necessary to ensure the most equitable allocation of funds.

With respect to DOE contractors, the 1975 amendments did not include a mechanism to increase the liability limit for contractor activities; thus, under current law the Federal Government still indemnifies its DOE contractors up to a $500 million limit of liability.

(4) History of claims experience

During the 29 years that have elapsed since passage of the Price-Anderson Act, there have been no serious accidents at commercial nuclear powerplants or Government-owned nuclear facilities that have resulted in the exposure of members of the public to significant amounts of radioactive material. Although the accident at Three Mile Island Unit 2 (TMI-2) caused extensive damage to the reactor, there is no evidence that any person living near the plant received a radiation dose from the accident as large as the Federal occupational radiation exposure limits for nuclear industry workers. In fact, the technical investigations of the accident have demonstrated that each of the 2 million people living near the TMI site received an average radiation dose, as a result of the accident, that is between 70 and 100 times less than what he receives in 1 year from naturally occurring radiation in the Harrisburg area. In spite of the fact that the public has not been accidentally exposed to significant amounts of radiation, on a number of occasions the compensation system established by the Act has been utilized to make compensation payments to members of the public and to workers

in nuclear facilities. The total of these payments is approximately $21 million.

(a) NRC Licensees

The accident at the TMI-2 is the only commercial reactor accident to date that has resulted in payments to the public. The payments include $1.3 million for emergency assistance, consisting of reimbursement for lost wages and evacuation and relocation expenses, and $14.3 million for the settlement of approximately 276 personal injury claims. Over 2,000 additional personal injury claims are pending in Federal and State courts in Pennsylvania.

The only other claims reported in the commercial reactor segment have involved numerous claims by nuclear powerplant workers against contractors or other nonemployers at a licensees' facility. These claims usually have involved alleged injury from radiation exposure in the course of the plaintiff's work. The total amount of money paid out to date for such claims is approximately $5 million.

(b) DOE contractors

To date, the Federal Government has paid out $270,000 for claims subject to Price-Anderson coverage: One claim involved an accident at a naval research reactor at the Idaho National Engineering Laboratory in 1961, and the other claim involved an incident at one of DOE's enrichment facilities. Neither of these claims involved injuries to the public.

NEED FOR THE LEGISLATION

The need for extending the Price-Anderson Act remains essentially the same as the need that existed when the Act was originally passed, which is to ensure adequate public compensation and to provide liability protection to facility operators in the event of a nuclear accident.

(1) Assurance of adequate public protection

While the safety record of the domestic nuclear industry over the past 30 years is extremely good, the remote possibility still exists that a severe accident resulting in serious offsite property damage and personal injuries could occur. The amount of private insurance is still insufficient to cover the potential amount of damage and personal injury claims. In the absence of the Price-Anderson system, the only recourse available for victims of an accident at a commercial nuclear powerplant would be legal action against the utility and other defendants, such as contractors and equipment suppliers. Regardless of the total amount of any resulting judgments against the defendants, the funds available to pay the judgments would be limited to private insurance proceeds and the value of the assets of the defendants, which could be insufficient to cover the total amount of liability.

Moreover, if a serious accident should occur at a nuclear facility owned by the Federal Government at a time when the Price-Anderson Act has been permitted to expire, it is likely that any members of the public injured by the accident would encounter much greater

difficulty in obtaining timely and adequate compensation. If the Price-Anderson Act were to expire, there is a high probability that many DOE contractors would withdraw from participation in DOE nuclear activities. (See following discussion under "Liability Coverage of Operators of Nuclear Facilities.") If that were to occur, the Federal Government's nuclear activities would continue, but they would be performed by Federal employees rather than contractors. Thus, if the negligence of Federal employees caused a nuclear accident, injured members of the public could attempt to obtain compensation only by filing suit against the Federal Government under the Federal Tort Claims Act (FTCA). Although the Act does not set a monetary limitation on the Government's liability, it imposes a number of significant legal obstacles to recovery of damages by victims of an accident. They include the following:

—The FTCA excludes any claim based upon the performance or the failure to perform a discretionary function or duty on the part of a Federal agency or an employee of the Government, whether or not the discretion involved has been abused. Thus, accidents that can be said to be the natural consequence of carrying out a Federal program are excluded.

—The Government is protected from claims that are based on the exercise of a governmental function, even when negligence is involved.

—Under the FTCA, and unlike the Price-Anderson Act, strict liability cannot be imposed on the Federal Government.

—Jury trials are not permitted under the FTCA.

—The award of punitive damages is prohibited.

—The FTCA contains a requirement that would make it extremely difficult to bring a class action on behalf of victims, because each injured person would first be required to file an administrative claim with the Federal agency implementing the program. That agency may take up to 6 months to act on the claim.

Clearly, the public still needs the assurance of adequate, prompt and equitable compensation for any damage or injuries resulting from a nuclear accident. The features of the current Price-Anderson system that assure a streamlined litigation process, and a large compensation fund readily available for payments to victims, provide the most compelling basis for continuing the public protection provided by the Price-Anderson framework.

Beyond the need to continue the public protection mechanism in the Price-Anderson system is the need to maximize the scope of the protection provided by that mechanism. This has been accomplished in two respects in the bill. First, the bill increases the amount of funds that would be immediately available to compensate victims in the event of a nuclear incident. By increasing the retrospective premiums paid by nuclear licensees from the current $5 million per reactor per incident to a level as high as $20 million, the public is assured that up to $2.5 billion will be readily available to pay for damage or injuries resulting from a nuclear incident. The four-fold increase in retrospective premium assessments represents a substantial additional financial burden that all utilities would share in the event that any one utility experienced a nuclear accident. Based on testimony received during the Committee's

hearing on the Price-Anderson Act held on June 25, 1985, this increase in retrospective premium fees represents the maximum amount of financial exposure that utilities could accept without jeopardizing their investment in nuclear power, and without subjecting their stockholders, bondholders and ratepayers to an unreasonably high financial risk.

Second, the bill broadens the Price-Anderson coverage to include nuclear incidents arising from the transportation, storage, or disposal of radioactive waste. Indeed, since passage of legislation in 1979 authorizing the Waste Isolation Pilot Project, and enactment of the Nuclear Waste Policy Act of 1982, clarification of the Price-Anderson Act with respect to Federal nuclear waste activities has been an important objective. With the imminent startup of the Waste Isolation Pilot Plant in New Mexico, and the activities between the Department of Energy and the potential high-level waste repository States, it is essential to define clearly in statutory language the Federal Government's responsibility to compensate the public fully, equitably, and efficiently for any accidents arising from Federal radioactive waste disposal activities.

(2) Liability coverage of operators of nuclear facilities

The current Price-Anderson Act provides indemnification authority to the Nuclear Regulatory Commission and the Department of Energy until August 1, 1987. A current licensee would continue to be covered for the term of his license. However, any reactors and other nuclear facilities that receive their NRC license after August 1, 1987, and that would require NRC indemnification up to the $560 million limit, would not be able to obtain NRC indemnification if the Act were allowed to expire.

For commercial nuclear powerplants seeking an NRC license after August 1, 1987, the consequences of Price-Anderson expiration are less clear. Since the licensing of the 80th commercial reactor in 1982 raised the total primary and secondary layers of financial protection to $560 million, the need for Government indemnity has been eliminated. The commercial nuclear power industry is now entirely self-indemnified through private insurance ($160 million) and self-insurance (an obligation on the part of each utility to pay $5 million per reactor per incident). Since any utility seeking a nuclear plant license in the future could join this self-indemnification pool, it is likely that expiration of Federal indemnification authority under Price-Anderson would have no adverse consequences for these licensees.

With respect to Department of Energy activities, all DOE contractors are covered under the Price-Anderson indemnification provisions of their present contracts. These contracts are normally subject to review and renewal at 5-year intervals. Several of the Department's major contracts will come up for renewal soon after the August 1, 1987, expiration of the Price-Anderson indemnification authority. If the Act were not extended, the Department could not include in its renewed contracts the Price-Anderson indemnification provision with respect to nuclear incidents. In that event, there is considerable doubt about the willingness of private contractors, subcontractors, equipment suppliers, and universities to continue to contract with the Department for nuclear-related ac-

tivities. As the Department has stated in its 1983 report to Congress on the need for Price-Anderson coverage:

> It is clear from the Department's experience that if its authority to enter into indemnity contracts were discontinued, there would be a strong reluctance on the part of existing contractors and potential contractors to do business with the Department. These include the contractor managers of the Department's major installations, as well as suitable replacement contractors. We believe this strong reluctance would extend down tier lines to knowledgeable subcontractors, suppliers and vendors who sell, design, build, test, or perform other work or services on any component of a nuclear facility or device.* * *
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> Looking ahead to 1987, at which time authority to enter into agreements for indemnification under section 170 d. will expire, the Department does not foresee any change in circumstance that would lead it to alter its view that Price-Anderson should be continued. If this statutory authority were permitted to expire, the Deparment could well be faced with a sharp programmatic crisis unless an equivalent protective system of coverage was available to replace it. In the latter regard, the cost of any insurance for a nuclear incident that would provide indemnity protection to the contractors, subcontractors, suppliers and vendors, as well as protection against loss or damage sustained by the public, would then, as now, have to be assumed by the Government, directly or indirectly, as part of its programmatic costs.

The Department of Energy currently contracts with over 100 primary contractors and over 60,000 subcontractors, suppliers, and service companies. Providing some form of indemnification against public liability claims for all these firms, absent Price-Anderson authority and the omnibus coverage that automatically applies to all subtiers below the primary contractors, would at best be an extremely difficult administrative task for the Department. That would be particularly true if DOE were to rely on the indemnification authority provided in Public Law 85–804 (50 U.S.C. 1431), and typically used in Government contracts. Because this indemnification authority does not include the omnibus coverage feature contained in the Price-Anderson Act, DOE would be compelled to write an explicit indemnification provision for each and every contractor, subcontractor and supplier conducting activities under risk of a nuclear incident. At worst, coverage without the Price-Anderson system would create risks that could force most companies to withdraw from participation in DOE activities.

Even more importantly, compensation of victims in the event of nuclear incidents at DOE facilities, absent the Price-Anderson Act, would be less predictable, less timely, and possibly inadequate compared to the compensation that is available under the Price-Anderson system. Although use of Public Law 85–804 could resolve the question of contractor indemnity, it would not provide to accident victims the kind of public protection features that the Price-Anderson Act offers, including emergency assistance payments, prioriti-

zation of claims, and consolidation of claims and waiver of defenses for extraordinary nuclear occurrences.

IV. Legislative History

S. 1225 was introduced on May 24, 1985, by Senator McClure and Senator Simpson. The bill was referred jointly to the Committee on Energy and Natural Resources and the Committee on Environment and Public Works, with the provision that if either committee reported the bill, the other committee would be obligated to report the bill within 120 calendar days or be discharged from further consideration of the bill.

The Committee on Energy and Natural Resources held hearings on June 25, 1985. Testimony was received from witnesses representing the Department of Energy, the Nuclear Regulatory Commission, the State of New Mexico, the State of Washington, the nuclear insurance companies, Edison Electric Institute, American Nuclear Energy Council, Atomic Industrial Forum, the Environmental Policy Institute, the Union of Concerned Scientists, and the U.S. Public Interest Research Group.

V. Committee Recommendation and Tabulation of Votes

The Committee met in open business session to consider S. 1225 on February 26, March 6 and 26, and April 16 and 23, 1986. On April 23, 1986, the Committee, with a quorum present, recommended that the Senate pass S. 1225 if amended as described herein. The rollcall vote on reporting the measure was 17 yeas and 1 nay, as follows:

YEAS	NAYS
McClure	Metzenbaum
Hatfield*	
Weicker*	
Domenici*	
Wallop*	
Warner	
Murkowski	
Nickles	
Hecht	
Evans*	
Johnston	
Bumpers*	
Ford	
Melcher	
Bradley	
Bingaman*	
Rockefeller	

*Indicates vote by proxy.

VI. Committee Amendment

S. 1225, as introduced, was amended by the Committee's adoption of a single amendment in the form of a complete substitute for the bill. The amendment adopted by the Committee incorporates a

large number of modifications and additions to the original bill. The major changes are described in this section.

In section 2, finding (3) was added to emphasize the Federal Government's responsibility to indemnify contractors for Federal activities involving the transportation, storage, and disposal of, and research and development on, radioactive waste.

Section 3 of S. 1225 as introduced provided three layers of financial protection required of the Nuclear Regulatory Commission (NRC) licensees: A primary layer of private insurance, a secondary layer of retrospective premiums in the range of $10 million to $15 million per reactor per incident, and a third layer totalling $500 million which would be collected by assessing a 1 mil/kWhr fee on electricity generated by nuclear power. The Committee modified this section by eliminating the third layer of financial protection and increasing the range of retrospective premiums in the second layer to a range of $15 to $20 million per reactor per incident.

In the bill as introduced, the amounts of financial protection required of NRC licensees would have remained unchanged throughout the 25-year renewal period of the Act. The Committee modified section 3 to provide for adjusting the retrospective premium level to account for the effects of inflation. The NRC is directed to annually adjust the premium level to reflect the change in the Gross National Product implicit price deflator.

A number of modifications and additions to section 4 of S. 1225 as introduced were made in order to strengthen the bill's provisions with respect to the nuclear liability coverage of DOE contractor activities in general and, more specifically, with respect to coverage of nuclear waste activities. These changes modify S. 1225 in the following respects:

(1) In subparagraph 170 d. (1)(A), the discretionary authority of DOE to indemnify its contractors is made mandatory;

(2) In subparagraph 170 d. (1)(B), indemnification is expressly provided for DOE contractors engaged in activities related to the disposal of nuclear waste, including activities authorized by the Nuclear Waste Policy Act of 1982 and activities at the Waste Isolation Pilot Project as authorized by Public Law 96–164;

(3) A change was made in subparagraph 170 d. (1)(B) with respect to the source of funds to pay claims resulting from nuclear incidents arising from activities authorized by the Nuclear Waste Policy Act of 1982. Clause (iv) of the bill as introduced, which would have directed DOE to draw funds on a pro-rata basis from the Nuclear Waste Fund and from DOE Defense Programs, was deleted. Instead, funds would be drawn solely from the Nuclear Waste Fund;

(4) Another change to subparagraph 170 d. (1)(B) broadens the Secretary's authority to use the Nuclear Waste Fund for purposes of the Price-Anderson Act. The amendment would permit the Secretary during any fiscal year to draw amounts from the Fund beyond what has been appropriated for that fiscal year, up to the limit of funds in subsection 170 b. In addition, the Secretary's authority to increase the utility fees or to borrow from the Treasury (sections a(4) and e(5) respectively of the Nuclear Waste Policy Act of 1982) may be used for Price-

Anderson related purposes, provided the expenditures do not exceed the limit established in subsection 170 b.;

(5) A new paragraph (7) was added that directs DOE to reimburse States for the costs of precautionary evacuations, provided that the Secretary concurs with the State's decision to evacuate. In the event that the Secretary does not concur, his decision can be overridden by a panel consisting of representatives of the NRC, the Federal Emergency Management Administration, and the State in which the evacuation took place;

(6) A new paragraph (8) was added that prohibits a contractor, in defending a claim brought as a result of a nuclear incident, from asserting immunity based on the governmental character of the activity;

(7) A new paragraph (9) was added that states that full compensation shall be provided under section 170 i. of the Price-Anderson Act, in the event that claims exceed the aggregate liability specified in subsection 170 e.; and

(8) A new paragraph (10) was added that authorizes the Secretary of Energy to impose civil penalties for nuclear incidents caused by the contractor's gross negligence or willful misconduct.

Language added to section 5 of S. 1225 requires the NRC to make annual inflation adjustments to the aggregate liability of any of its licensees that are not required to carry the maximum amount of financial protection.

In section 6 of S. 1225, a descriptive phrase was added to subparagraph 170 i. (2)(B) to clarify that each of the President's compensation plans submitted to Congress will provide for "full, equitable, and efficient compensation for all valid claims."

In section 7 of S. 1225, a new paragraph (3) was added to subsection (b) that deletes the 20-year statute of limitations requirement from section 170 n. the of Price-Anderson Act. The net effect of this change is to permit claims to be filed within 3 years of the date on which the claimant first knew or reasonably could have known of his injury or damage.

Several modifications to section 9 of the bill make further changes or additions to section 11 of the Atomic Energy Act, which contains the definitions of terms. Subsection (c) was added to the bill to expand the definition of "nuclear incident" to include precautionary evacuations. Also added were subsection (d), which defines the term "precautionary evacuations," subsection (e), which defines the term "nuclear material," and subsection (f), which defines the term "radioactive waste."

Three new sections were added to S. 1225, as follows:

Section 15 deletes the word "substantial" from the Price-Anderson Act;

Section 16 adds a new subsection 170 q. to the Price-Anderson Act, which extends Price-Anderson coverage to include nuclear incidents arising from acts of theft or sabotage, including an incident that occurs after the nuclear material has been successfully diverted from its intended place of confinement; and

Section 17 adds a new subsection 170 r. to the Price-Anderson Act, which prohibits a court from awarding punitive dam-

ages in any action against a person who is indemnified by the United States under the Price-Anderson Act.

VII. Section-by-Section Analysis

Section 1 provides that this Act may be cited by its short title, the "Price-Anderson Act Amendments Act of 1986".

Section 2 provides a statement of congressional findings and purposes regarding compensation to the public for injuries suffered as a result of accidents involving nuclear materials. The basis for these findings and purposes is the Committee's recognition of the importance of not only continuing, but also broadening, the provisions of the Price-Anderson Act, in order to best serve the public's need for an equitable, efficient, reliable, and comprehensive system for full compensation in the event of a nuclear incident. The Committee is especially aware of the need to expand the Price-Anderson system to account for developments that have taken place since the 1975 extension of the Act, in particular, the additional responsibilities of the Federal Government with respect to the disposal of radioactive waste. Thus, the Committee agreed to recognize explicitly in this section the need to include a mechanism to provide full compensation to the public under the Price-Anderson Act for these new Federal responsibilities.

Section 3 establishes the financial protection requirement for those commercial nuclear powerplants licensed by the Nuclear Regulatory Commission that have a rated capacity of 100,000 electrical kilowatts or more (section 170 b. of the Atomic Energy Act of 1954, as amended). In addition to the requirement to obtain the maximum amount of private insurance available (currently $160 million), this section directs the Commission to increase the standard deferred premium which may be charged each reactor following any nuclear incident, from its current level of $5 million to an amount not less than $15 million nor more than $20 million. Under this section, the Commission would be required to undertake a notice and comment rulemaking to determine where in this range to set the standard premium, considering such factors as the Commission deems appropriate, and to promulgate a final rule, within 12 months of the date of enactment of this Act, establishing the maximum standard deferred premium to be assessed each reactor per nuclear incident. With 100 nuclear powerplants currently in operation and an additional 15 plants expected to be completed in the early 1990's, the maximum amount of funds obtainable from the private insurance layer and the deferred premium layer would total approximately $2.5 billion. This compares with a total of $660 million obtainable under the present Act. In making these changes to section 170 b. of the Price-Anderson Act, the Committee intended to maximize the amount of funds that could be made readily available to the public following a commercial nuclear incident.

The Commission is required to adjust the deferred premium on an annual basis to reflect the effects of inflation as measured by the Gross National Product implicit price deflator. Accordingly, this annual fee adjustment would cause the total liability limit to rise in tandum with any cost-of-living increases that take place during the 25-year extension period of the Act.

Section 4 makes major changes in section 170 d. of the Price-Anderson Act, which applies to Department of Energy contractors involved in the construction or operation of production or utilization facilities or other activities, including nuclear waste activities, that involve the risk of public liability for a nuclear incident.

Paragraph (1) of section 170 d. extends by 25 years the authority of the Department of Energy to enter into agreements of indemnification with such contractors, from the current expiration date of August 1, 1987, to August 1, 2012. This renewal period extends well beyond the 1998 startup date for the first deep geologic repository for high-level waste, so as to avoid any possibility of interruption in coverage at the very time when the public's demand for this coverage may be greatest. In order to ensure that the public is adequately protected under this section, this indemnification authority is made mandatory for all Departmental contracts involving risk of public liability for a nuclear incident.

Recognizing the recently heightened public interest in the Department's nuclear waste activities, the Committee included in section 4 a number of provisions to clarify the application of the Price-Anderson Act to radioactive waste transportation, storage, disposal, research, and development activities of the Department of Energy. In subparagraph 170 d. (1)(B), the Secretary is directed to enter into agreements of indemnification to cover all activities undertaken by contract for the Department of Energy involving the storage or disposal of radioactive waste. These activities include the transportation of such materials to a storage or disposal site or facility, the construction and operation of any such site or facility, and research and development on radioactive waste. Specific activities identified for coverage under this section include activities authorized by the Nuclear Waste Policy Act of 1982 and activities at the Waste Isolation Pilot Project authorized in Public Law 96–164.

If a nuclear incident should involve activities authorized by the Nuclear Waste Policy Act of 1982, payments for all valid claims would be made from the Nuclear Waste Fund. This Fund, which totals over $1.4 billion in payments from the nuclear utilities as of May, 1986, was established by the Nuclear Waste Policy Act of 1982 to cover the costs associated with the development and operation of a deep geologic repository for high-level waste. Payments into this Fund from DOE Defense Programs are forthcoming and will represent the additional costs of handling those defense wastes that will ultimately be disposed of at the Commercial Waste Repository.

Under the provisions in subparagraph 170 d. (1)(B) of the Price-Anderson Act, the Secretary is authorized to draw from available funds in the Nuclear Waste Fund account beyond amounts appropriated for that fiscal year, up to the liability limit established by the Price-Anderson Act. Furthermore, the Secretary may borrow additional funds or increase the utility fee assessment pursuant to authority granted by the Nuclear Waste Policy Act of 1982. If a nuclear incident should involve nuclear waste activities not related to the Department's authority under the Nuclear Waste Policy Act, the source of funds to pay claims would be the same as that used for all other DOE contractor activities; that is, DOE appropriated funds.

Paragraphs (2) and (3) of section 170 d. provide for an increase in the amount of Federal indemnity for public liability claims arising out of or in connection with DOE contractual activities, from the current level of $500 million to an amount equal to the sum of the two layers of coverage mandated for NRC reactor licensees in section 170 d. of the Atomic Energy Act. Thus, if the total liability of the NRC licensees increases through the licensing of new plants or adjustments for inflation, the DOE indemnity will automatically rise by an equivalent amount.

In the past, Price-Anderson coverage of DOE contractor activities has not kept pace with the expanding coverage available for NRC licensees. The changes made in paragraphs (2) and (3) would bring DOE contractor coverage in line with that required to NRC licensees. In view of the recommendations made in the 1983 DOE report on Price-Anderson coverage which recognized the need for equivalency, and in light of the similar risk associated with either activity, the Committee determined that coverage for DOE contractor activities should be equivalent to that for NRC licensee activities. However, in an effort to stabilize the coverage of DOE contractors regardless of any future reductions in NRC reactor licensee coverage that might result from a decline in the number of commercial nuclear plants in operation, paragraph (3) includes a proviso that the Federal indemnity shall not be reduced in the event that the financial protection required of NRC commercial reactor licensees is reduced.

Paragraphs (4), (5) and (6) consist of unchanged provisions in the existing Price-Anderson Act. Paragraph numbering of these provisions was added to conform to the remainder of the subsection.

Paragraph (7) expands Price-Anderson coverage of DOE contractor activities to include costs of precautionary evacuations, provided that the Secretary of Energy initially or subsequently concurs with the evacuation decision made by the State or local government. If the Secretary does not concur, his decision may be overridden by a panel consisting of one representative each from the Nuclear Regulatory Commission, the Federal Emergency Management Administration, and the State in which the evacuation took place.

This provision closes a gap in current Price-Anderson coverage. Although precautionary evacuations from a commercial nuclear facility are included in the private insurance layer of Price-Anderson coverage in the case of an NRC licensee, and evacuation from the vicinity of a DOE facility would be covered only if it were associated with an actual nuclear incident. Recognizing this inconsistency, the Committee first broadened the definition of "nuclear incident" to explicitly include precautionary evacuations at NRC-licensed and DOE-owned facilities. Secondly, the Committee expanded DOE's coverage in section 170 d. to explicitly include reimbursement to States for evacuation of residents in the vicinity of a DOE facility even if no nuclear incident had occurred, provided that the decision to evacuate is found to be reasonable by the Secretary of Energy or the review panel described above. It is the Committee's expectation that such a panel will be able to approach the decision with sufficient objectivity so as to satisfy the concerns of all interested parties.

Paragraph (8) prohibits a contractor in defending a claim brought as a result of a nuclear incident from asserting immunity based on the governmental character of the activity. The need for this provision was especially inportant, in the Committee's viewpoint, to ensure coverage at all times for nuclear incidents involving the disposal of defense wastes, where a contractor, in the absence of this provision, might invoke sovereign immunity as a defense, by pointing to the discretionary function of the Federal Government with respect to defense waste disposal. This provision will preclude such a possibility.

Paragraph (9) provides that, in the event of a nuclear incident resulting in public liability claims in excess of the aggregate liability of the contractor as determined under subsection 170 e., full compensation for all valid claims shall be paid through expedited congressional action on additional compensation plans according to the procedures in subsection 170 i.

Paragraph (10) grants to the Secretary of Energy the authority to impose a civil penalty on any DOE contractors for gross negligence or willful misconduct that causes a nuclear incident. Under this provision, the Secretary has the sole discretion to determine, subsequent to a nuclear incident, whether gross negligence or willful misconduct on the part of the contractor, subcontractor, or supplier caused the incident. If the Secretary decides to proceed with a determination, an agency hearing before an Administrative Law Judge must be conducted prior to the Secretary's determination. If the Secretary decides to impose a penalty, the amount may not exceed $10 million, and it must not exceed the extent to which the contractor's negligence or misconduct actually contributed to the damage or injuries resulting from the incident. The contractor would have the right to appeal the penalty to a U.S. Court of Appeals. Any penalty assessment made under this provision would be paid directly by the contractor, and could not be subsequently reimbursed by the Department either indirectly or directly in the process of fulfilling contractual obligations.

The Committee intends that the Secretary would use his discretionary authority to impose civil penalties as he judges appropriate, given the specific circumstances of any particular nuclear incident. The Committee is fully aware of the Department's current incentives for excellence in contractor performance, especially the use of the award fee system, where the size of the award a contractor receives for performance of its contractual obligations is in direct proportion to its performance record. In cases of poor or unacceptable contractor performance, the Department can withhold the entire award fee or terminate the contract altogether. The Committee believes that the civil panalties authority in S. 1225 will provide an additional incentive for excellence in contractor performance.

Section 5 makes three major changes in the Price-Anderson Act. First, this section increases the aggregate liability for a single nuclear incident (i.e., the amount of funds immediately available following an accident) for NCR commercial reactor licensees and all DOE contractors to an amount equal to the sum of the two layers of financial protection required of NRC commercial reactor licensees under subsection 170 b. For DOE contractors, this amount

would increase as the coverage available for comercial reactor licensees increases, and would, at all times, remain equal to the maximum amount of such financial protection. Aggregate liability for DOE contractors would not be decreased in the event that the financial protection required of commercial nuclear reactor licensees decreases as a result of a decline in the number of operating reactors.

Second, this section sets a liability limit for certain other NRC licensees, including commercial power reactors rated below 100,000 kWe, university research reactors, nonpower reactors, Federal agency licensees, and plutonium processing and fuel fabrication facilities, at a level ranging from $500 million to $560 million. The liability limit that the NRC sets for these licensees must be adjusted annually to account for inflation.

Third, this section provides that in the event of a nuclear accident involving damage in excess of the amount of compensation funds immediately available, the Congress will thoroughly review the accident and will take whatever action is necessary to compensate the public in full for all valid claims resulting from the accident, according to the procedures set forth in subsection 170 i. The Committee emphasizes that, if the aggregate public liability resulting from a nuclear incident should exceed the liability limit of the licensee or contractor that owns or operates the facility involved, additional funds required for payment of all valid claims should be made available through the congressional process according to the provisions in subsection 170 i.

Section 6 amends subsection 170 i. of Price-Anderson by establishing the requirements and procedures for congressional review of any nuclear accident that appears likely to result in public liability claims in excess of the funds immediately available for compensation.

Certain reports would be initiated under this section, including a comprehensive report by NRC or DOE concerning the details of the incident, and a Presidential report to Congress that would review the causes of the incident and the extent of damage, and would propose one or more compensation plans that would provide for full, equitable, and efficient compensation for all valid claims.

The Congress would then consider and act upon the President's compensation plans in accordance with expedited congressional review procedures, in order to ensure that a prompt decision would be reached by Congress within 60 days of the date that the plan was originally submitted to Congress.

The Committee expects that the provisions of this section will significantly strengthen the original subsection 170 i. of Price-Anderson, in the sense that the explicit actions and time constraints required in the revised language will provide additional assurance that Congress, in a timely manner, will take whatever action is necessary to compensate the public in full for all valid public liability claims arising from a nuclear incident.

The responsibilities assigned to the President and the Congress will achieve several objectives:

(1) They will ensure a thorough review of the specific causes and consequences of any nuclear incident.

(2) They will enable the compensation plans to be tailored to the particular circumstances of the incident. This would involve selecting the appropriate sources and disbursal rate of funds for payments of claims.

(3) They allow for a congressional review mechanism and a major decisionmaking role that ensure prompt action.

(4) They focus the efforts of both the President and the Congress on the types of actions that will provide for full compensation of the public in an equitable and efficient manner.

Section 7 amends subsection 170 n. of the Price-Anderson Act to broaden the application of the waiver-of-defense feature of the existing Act. Under the current law, certain defenses are waived whenever the NRC or the DOE determine that the incident is of sufficient magnitude to be deemed an "extraordinary nuclear occurrence" (ENO). Section 7 broadens the application of the ENO determination to include incidents involving radioactive wastes and incidents involving nuclear materials licensees indemnified by the NRC.

Paragraph (b)(3) of this section eliminates the 20-year statute of limitations contained in the current law. A plaintiff would be permitted to file a claim within 3 years of the date on which he first knew or reasonably could have known of his injury or damage. This change reflects changes in most State laws since the 1975 renewal of Price-Anderson: 37 States currently have some type of discovery rule in place that take into account the long time intervals between exposure to an ultrahazardous material and subsequent manifestation of latent injuries. Such is the case with exposure to radiation, where latent cancers may take 20 years or longer to develop. Moreover, from the perspective of radioactive waste disposal, an incident which allowed radioactive materials to enter the environment from a deep geologic repository might not be recognized until years after the incident occurred.

Section 8 extends by 25 years, until the year 2012, the authority of the Nuclear Regulatory Commission to indemnify certain licensees as described in subsection 170 c. of the Price-Anderson Act.

Section 9 amends certain definitions in section 11 of the Atomic Energy Act, and it adds three new definitions. Subsection 9(a) amends the definition of "person" contained in section 11 s. of the Atomic Energy Act to provide that in the event that the Secretary of Energy undertakes activities involving the storage or disposal of or research and development on, radioactive waste, including the transportation of such materials to a storage or disposal site or facility, and does so directly, rather than by contract, the Secretary (as well as any Department of Energy employees) shall be treated as if the Secretary were a contractor with whom an idemnity agreement had been entered into pursuant to section 170 d. Under this provision, the coverage of the Price-Anderson Act would be available regardless of whether such activities were undertaken by the Department of Energy directly, or pursuant to a contractual agreement. This would be particularly desirable during the post-closure phase of commercial waste repository operation, when the Department may find it more suitable to provide caretaking responsibilities by using its own personnel.

Subsection 9(b) amends the definition of "person indemnified" in section 11 of the Atomic Energy Act. This modification references the preceding of "person" in section 11, so as to remove any ambiguities concerning who is indemnified. Because the definition of "person" includes any State, any political subdivision of, or any political entity within a State, these entities are thus clearly indemnified with respect to nuclear incidents.

Subsection 9(c) amends the definition of nuclear incident, for purposes of the Price-Anderson Act, to include precautionary evacuations. This amendment is required to conform the definition of nuclear incident to the provisions in section 4 of S. 1225 that require the Department of Energy to reimburse States for the costs of precautionary evacuations.

Subsection 9(d) defines the term "precautionary evacuation". Such evacuations involve a decision by a State or local government to temporarily remove the public from the vicinity of a facility or transportation route due to perceived risk of damages from a nuclear incident.

Subsection 9(e) defines the term "nuclear material". The term is used to embody certain specific terms used in the Price-Anderson Act, including source material, special nuclear material, byproduct material, or radioactive waste. These terms are all defined in section 11 of the Atomic Energy Act. The actual term "nuclear material", however, has heretofore never been defined.

Subsection 9(f) defines the term "radioactive waste". The new term was incorporated into S. 1225 in order to refer to all spent nuclear fuel, high-level radioactive waste, transuranic waste, or low-level radioactive waste that is a Federal responsibility, without having to explicitly list these wastes every time they are referred to in the Price-Anderson Act.

Section 10 extends by 25 years the NRC's authority to indemnify certain nonprofit educational institutions engaged in operation of research reactors. This extension period parallels other indemnification-period extensions made in the bill for other NRC or DOE activities.

Section 11 eliminates the requirement in section 170 o. of the Act for the Commission to submit a report to the Joint Committee on Atomic Energy. The modifications to subsection 170 i. of the Price-Anderson Act (section 6 of S. 1225), giving the President the reporting responsibilities following a severe nuclear incident, make the report by the Commission obsolete.

Section 12 requires the Nuclear Regulatory Commission and the Department of Energy to submit separate reports to the Congress by August 1, 2008, 4 years before the expiration of the Federal indemnification authority granted by the Price-Anderson Act. The reports would review the operations of each respective agency under this Act, and make recommendations for modifying or extending the authority of this Act. Similar provisions have been included in past renewals of the Price-Anderson Act.

Sections 13, 14, and 15 contain a number of technical and conforming revisions to the Act which reflect the abolishment of the Atomic Energy Commission in 1974 and its replacement by the Nuclear Regulatory Commission and the Department of Energy.

Section 16 expands the coverge of the Price-Anderson Act to include any public liability claims resulting from a nuclear incident caused by the illegal diversion of nuclear material from a facility site or a planned transportation route. The source of funds for compensation of public liability claims would depend on the ownership of the diverted nuclear material. Ownership by an NRC licensee would trigger compensation under section 170 c., and ownership by the Department of Energy (or the inability to determine ownership) would trigger compensation under section 170 d.

The Committee determined that this provision is needed to close what otherwise would be a gap in the Price-Anderson coverage. The Act currently does not expressly refer to acts of theft, sabotage or terrorism. The NRC staff has concluded that with respect to a nuclear incident caused by an act of theft or sabotage, coverage under current law would depend on the geographic location of such incident. An incident occurring on a plant site or planned transportation route would be covered under Price-Anderson; but, an incident at a location remote from a facility or a planned transportation route would not be covered.

The Committee emphasizes that the language in section 16 of the bill does not create legal liability in circumstances where nuclear material has been illegally diverted from its intended place of confinement or intended transportation route. The intent of the section is only to extend the scope of Price-Anderson coverage to include the liability, determined under applicable tort law, in circumstances where nuclear material is illegally diverted and used to commit terrorist or other criminal acts. Section 16 does not affect the law to be applied to determine the liability of such persons for the terrorist or criminal acts of others. If liability is found, however, funds available through the Price-Anderson system would be available to provide compensation to persons injured or who suffer property damage and to protect the interests of persons who may be liable (other than the persons who commit the criminal acts) in circumstances where the nuclear material is clearly identified with respect to title. In circumstances where the source of the nuclear material cannot be clearly identified, the indemnity provided to DOE contractors under the Price-Anderson Act would be available as the source of compensation if liability were found to exist.

Section 17 prohibits a court, in any action with respect to a nuclear incident, from awarding punitive damages against a person indemnified by the United States. Thus, in public liability claims against DOE contractors, or against those NRC licensees requiring indemnification by the United States, this modification insures that punitive damages will not be paid by taxpayers. This provision is consistent with established Federal policy, most forcefully stated in the Federal Tort Claims Act 28 U.S.C. 2674), that punitive damages may not be awarded against the Federal Government. The amendment does not preclude the award of punitive damages against licensees for which Price-Anderson liability coverage does not involve Federal indemnity. The Committee intends that no preference, for or against punitive damages in suits against licensees not indemnified by the United States, be inferred from the inclusion of section 17 in the bill.

VIII. Cost and Budgetary Considerations

The following estimate of the cost of this measure has been provided by the Congressional Budget Office:

U.S. Congress,
Congressional Budget Office,
Washington, DC, May 9, 1986.

Hon. James A. McClure,
Chairman, Committee on Energy and Natural Resources,
U.S. Senate, Washington, DC.

Dear Mr. Chairman: The Congressional Budget Office has reviewed S. 1225, the Price-Anderson Act Amendments of 1986, as ordered reported by the Senate Committee on Energy and Natural Resources, April 23, 1986. This bill would increase the government's potential financial liability in the event of certain types of nuclear accidents. Because there is no basis for predicting the number and magnitude of such incidents, CBO cannot estimate the cost of the increased liability. No significant costs to the federal government would result from other provisions of S. 1225.

BILL PURPOSE

S. 1225 extends and revises the Price-Anderson Act, which governs the liability and indemnification of federal licensees and contractors in the event of a nuclear acident. Under this law, the Nuclear Regulatory Commission (NRC) regulates and indemnifies licensees, and the Department of Energy (DOE) indemnifies its contractors.

This bill raises the maximum liability for a nuclear accident involving commercial power plants and federal contractors from $0.7 billion and $0.05 billion, respectively, to an estimated $2.2 billion per incident. The bill sets the liability limit according to the amount of financial protection that the NRC requires commercial licensees to maintain from primary liability insurance (currently $160 million per plant) and from deferred premiums levied on all other operating plants (from $15 million to $20 million per reactor, as determined by the NRC, and as adjusted for inflation in future years). Special procedures are included in the bill for Congressional action on claims exceeding these limits.

The increase in the liability for accidents involving commercial plants would not affect the federal government's financial liability, because it would be covered by an increase in the amount of private financial protection that the licensees must maintain. On the other hand, because the government fully indemnifies federal contractors, the increase in liability for incidents involving the contractors would be borne by the federal government. The liability and indemnification of other licensees would remain at current levels.

S. 1225 explicitly makes federal indemnification applicable to certain activities or incidents. For example, it confirms that DOE must indemnify contractors involved with its nuclear waste programs. It provides for federal compensation of claims arising from incidents involving nuclear material that has been illegally obtained from unknown sources, and allows for the reimbursement of

the cost of precautionary evacuations resulting from incidents involing contractors indemnified by the federal government under certain conditions. The bill authorizes DOE to assess civil penalties against its contractors if it is determined that an incident resulted from the gross negligence or willful misconduct of the contractor. It precludes courts, however, from awarding exemplary or punitive damages under state law against contractors and certain licensees indemnified by the federal government

Finally, the bill provides special methods for compensating claims arising from activities financed by the Nuclear Waste Fund. Under S. 1225, claims related to the Nuclear Waste Fund are to be paid directly from the resources in that fund, and are not subject to appropriation. If the fund's resources are insufficient to meet all valid claims, the bill directs DOE to exercise its existing authority to either increase its fee on electricity from nuclear power plants or to borrow funds from the Treasury. Such borrowings require appropriations.

BUDGET IMPACT

The provisions affecting the government's financial liability would not increase federal spending in fiscal years 1986 through 1991 unless a nuclear incident involving federal indeminification occurs in those years. If such an accident were to occur, enactment of the bill would increase the government's potential financial liability by an estiamted $1.7 billion per incident for incidents currently covered by the Price-Anderson Act, and by an estimated $2.2 billion per incident for incidents not indemnified by the government under existing law but covered under S. 1225. This estimate assumes that commercial licensees would be required to maintain $160 million in primary liability insurance, and the 100 reactors with operating licenses would be subject to the maximum deferred premiums. The government's liability ultimately would depend on the NRC's policies regarding commercial licensees' financial protection, and could increase in the future as a result of the indexing of the premiums and any increase in the number of operating reactors. Raising the liability and indemnification limits is not expected to affect the government's costs for claims currently pending before the courts and DOE, because the amount of alleged damages per incident does not exceed the liability limit in existing law.

Likewise, DOE would not be expected to exercise the direct spending authority created by the bill in the 1986–1991 period, under the baseline assumption that no nuclear accidents involving Nuclear Waste Fund activities would occur in those years. The amount spent in the event of an accident is unlikely to be affected by the spending authority provided in the bill.

Other provisioins in the bill are expected to have no significant impact on federal outlays.

No costs would be incurred by state or local governments as a result of enactment of this bill.

If you wish further details on this estimated, we will be pleased to provide them.

With best wishes,

Sincerely,

RUDOLPH G. PENNER, *Director.*

IX. REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of Rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact of S. 1225, as reported.

The bill is not a typical regulatory measure in the sense that it would require private individuals, businesses, universities, electric utilities, or other entities to comply immediately with new Government-established standards. However, in the event of a nuclear incident, the bill would impose several new requirements that possibly would be applied, depending on the circumstances.

First, NRC licensees with nuclear plants of a rated capacity of 100,000 KWe or more would be subject to the requirement that they pay deferred premiums up to a maximum amount substantially greater than what is required under current law.

Second, the bill assigns to the Secretary of Energy a new regulatory responsibility to impose, at his discretion, civil penalties of up to $10 million on any DOE contractor whose gross negligence or willful misconduct caused a nuclear incident. No other regulatory responsibilities are assigned to the Federal Government.

Finally, if the incident should be found to be an "extraordinary nuclear occurrence," the bill would impose a new tort law standard relating to the statute of limitations applicable to filing suits for damages. A claimant would be permitted to file suit within 3 years of the time he discovered or reasonably should have discovered his injury or damage. This new Federal standard would supersede more restrictive State tort law standards, but would have no effect on more liberal State laws.

The primary purpose of the bill is to establish a contingency plan for the settlement of public liability suits and for securing funds for victim compensation in the event of a nuclear incident. Thus, enactment of the bill would not result in an immediate or direct economic impact on either NRC licensees or DOE contractors.

The bill does not require that any new regulatory programs be conducted by State or local governments. There is no impact on personal privacy from S. 1225. Little if any additional paperwork would result from the enactment of S. 1225.

X. EXECUTIVE COMMUNICATIONS

There were no legislative reports or communications received by the Committee from the Administration relating to S. 1225.

Following is the testimony submitted by the Administration at the June 25, 1985, Committee hearing.

STATEMENT OF
JAMES W. VAUGHAN, JR.
ACTING ASSISTANT SECRETARY FOR NUCLEAR ENERGY
BEFORE THE
SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT
COMMITTEE ON ENERGY AND NATURAL RESOURCES
U.S. SENATE

JUNE 25, 1985

Mr. Chairman, it is a pleasure to be here to discuss the Department of Energy's position on extending the Price-Anderson Act--a key subject in the Department's continuing nuclear activities as well as in the viability of the nuclear power option in this country.

I will briefly discuss the recommendations made by the Department in our August 1983 report to Congress on extending the Price-Anderson Act, discuss its relevance to the Department's nuclear operations, comment on the safety record of the nuclear industry, and briefly note how foreign governments have dealt with the indemnification issue. Finally, I will summarize the Department's recommendations for an appropriate course of action with regard to continuing indemnification and liability protection for those organizations involved in nuclear activities.

BRIEF HISTORY OF PRICE-ANDERSON

In 1957, the Price-Anderson Act was added to the Atomic Energy Act of 1954 for the purposes of (1) removing the deterrent to private sector participation in the use of nuclear power presented by the threat of potentially large liability claims in the event of a nuclear accident and (2) to provide the public with an assured, timely source of funds in the event of such an accident.

The original Price-Anderson Act required that persons operating commercial nuclear power reactors producing 100,000 kilowatts or more maintain financial protection in an amount equal to the maximum amount of private insurance available (at that time $60 million) to cover public liability claims that may arise in the event of a nuclear incident. A nuclear incident is the name given to any occurrence (including an extraordinary nuclear occurrence) causing bodily injury, sickness, disease or death, or property loss or damage resulting from the hazardous properties of source, special nuclear, or by-product material. The Act also provided for Government indemnity payments, in an amount not to exceed $500 million, in the event that claims for an accident exceeded the amount of financial protection maintained by the powerplant operator. Government indemnity up to $500 million was also authorized for Government contractors engaged in nuclear activities. The aggregate liability for any person who may be liable for an incident was limited in the Act to the sum of the amount of Government indemnity plus the amount of required financial protection, which resulted in a limitation on liability of $560 million for commercial powerplant operators and $500 million for Government contractors.

The original Act also provided for expiration in 1967 of the Government's authority to indemnify. In 1965, Congress extended the Act until 1977, and identified a number of problem areas relating to the means by which persons might obtain prompt and adequate financial compensation. Therefore, in 1966, Price-Anderson was amended to provide that, in the event of a major nuclear accident, persons who may be liable for the accident would be required to waive certain defenses that would otherwise be available to

them under state law. The waiver of defenses are triggered in the case of the declaration of an extraordinary nuclear occurrence. An extraordinary nuclear occurrence is a severe nuclear incident defined by prescribed levels of radiation dose, radiation contamination, property damage, and personal injury. Provisions regarding emergency assistance payments and consolidation of claims were also enacted in 1966.

In 1975, Congress again extended the indemnity provisions of the Act for 10 years (from 1977 to 1987) and added a system of retrospective insurance payments to be provided by the commercial nuclear power utilities in the event of an incident connected with a commercial powerplant. Under this new provision, in the event of a nuclear incident causing damages in excess of the amount of private insurance available, each large commercial nuclear power operator would be assessed a prorated share of damages up to $5 million per reactor per incident. The purpose of this provision was twofold: (1) to eliminate the need for Government indemnity, which occurred when private insurance reached $160 million (in 1979) and a sufficient number of reactors were licensed (in 1982) to meet a level of financial protection totalling $560 million and (2) to increase the limitation on liability above $560 million by $5 million as each new reactor was licensed. Currently there are 95 licensed reactors. Therefore, today the limitation on liability is $635 million ($160 million of private insurance plus $5 million for each licensed reactor).

The provisions regarding Government contractors were not significantly amended in 1975 and the Act has not been amended since that time.

In 1983, the Department of Energy and the Nuclear Regulatory Commission each submitted reports to Congress in accordance with subsection 170(p) of the Act, recommending continuation of the Act as it applies to their respective activities and proposing certain amendments to the Act.

The Department made five recommendations in its 1983 report and concluded that:

- The Price-Anderson contract indemnity system should be continued to ensure furtherance of the Department's statutory mission in research and development, production, defense and other nuclear fields, and protection of the public.

- The present Price-Anderson limit of liability in connection with the Department's contractual activities should be made equivalent to that provided for commercial licensed activities.

- The Price-Anderson Act should not be amended to include coverage for the cost of a precautionary evacuation when no nuclear incident in fact occurs. Experience indicates that the Department's nuclear programs pose no greater need for such protection than other Government programs involving potentially hazardous materials.

- The Price-Anderson contract indemnity system should not be amended to include coverage for acts of theft or sabotage when the activity cannot be traced to a licensed or contractual activity and satisfy the criteria for coverage.

- The Price-Anderson Act should be amended so that the waiver of defenses provision applies to civilian and defense high-level and spent fuel waste facilities.

In the Department's August 1983 report on extending Price-Anderson, we recommended that the liability limit for DOE contractors equal that provided NRC licensees. DOE anticipated that the NRC would recommend an absolute liability cap. When the NRC issued its report in December 1983, the Commission recommended that the absolute liability limitation be changed to an annual limitation, a position with which the Department does not agree.

IMPACT OF PRICE-ANDERSON ON DOE OPERATIONS

The Department's nuclear activities include research and development, testing and production of nuclear weapons, nuclear materials production, naval reactors development, inertial confinement fusion, and defense and commercial radioactive waste. These activities are carried out at a number of diverse facilities. Currently the Department has indemnity agreements with 45 prime contractors (with over 60,000 subcontractors and vendors covered under these agreements through the omnibus provision of the Price-Anderson Act).

An additional 62 contractors have 81 contracts executed pursuant to the Nuclear Waste Policy Act. These contracts provide that the Department will include in its contracts for the operation of any Department of Energy spent fuel and high-level waste facility (e.g., a geologic repository) an

indemnity agreement based on the Price-Anderson Act that indemnifies not only the operating contractor but any other person who may be liable for a nuclear incident arising out of, or in connection with, radioactive waste management activities.

During the past 28 years, there has only been one severe nuclear-related incident at Federal facilities. This incident, involving an Army reactor, resulted in the death of three U.S. servicemen. To put this in perspective, in 1984 there were seven work-related fatalities--none resulting from a nuclear accident--among the Department's 165,000 Federal and contractor employees. During that year, there were 304 fatalities in a total Federal civilian work force of approximately 2.8 million employees.

COMMERCIAL NUCLEAR POWER SAFETY

Since the beginning of commercial nuclear power operation in 1957, not a single death has been caused by radiation or other factors resulting from a nuclear incident. Only 112 incidents--none declared an extraordinary nuclear occurrence--have been reported to the commercial nuclear insurance pools since they began operation in 1957. During this period, a total of only $43 million has been paid for third party claims, of which $41 million resulted from the Three Mile Island (TMI) accident. Payments for on-site property damage totaled $488 million, primarily from the TMI accident.

This is an outstanding safety record when compared to a wide range of other activities or technologies, most of which are perceived as being common, ordinary, everyday activities. Since 1957, some 1.4 million people have

been killed in automobile accidents; nearly 23,000 in train accidents; some 44,000 in airplane accidents; nearly 200,000 due to fires or explosions (natural gas, etc.); and over 6,000 in coal mining accidents. This list of everyday activities, in which large numbers of people are killed each year, could be extended at length, and yet most of these activities are not perceived as being overly risky by the general public. This is in sharp contrast to commercial nuclear power, where not a single death has been caused by radiation, and yet a large segment of the public appears to be quite fearful about the safety of the industry.

The commendable safety record of the nuclear industry can also be illustrated by comparing it to the risk of being murdered, an event I believe most Americans consider rather remote. What we find, however, is that the latter prospect is not so remote. The Bureau of Justice Statistics estimates that the average American faces a risk of 1 in 133 of becoming a victim of homicide in his or her lifetime. The risk is much higher for certain groups; for example, the risk of homicide for males is estimated to be 1 in 84.

The high degree of safety of nuclear power can also be demonstrated by comparing the fuel cycle risks to the public and to occupational workers resulting from generating electricity from nuclear power versus coal-fired plants. Such comparisons have been required since 1979 as part of the Environmental Impact Statement for nuclear powerplants. The nuclear fuel cycle includes mining, uranium enrichment, fuel processing and fabrication, power generation, fuel storage, transportation, reprocessing, and waste management. The coal fuel cycle contains the equivalent steps but excludes

uranium enrichment, fuel fabrication, and reprocessing. In a December 1984 paper authored by a Nuclear Regulatory Commission staff member, the total fuel cycle risk to the general public and plant workers was given as .59 to 1.7 fatalities per plant year for the nuclear fuel cycle and 15 to 120 fatalities per plant year for the coal fuel cycle. In fact, according to the risk estimates in this recent paper, the estimated fatalities per plant year resulting from coal transportation alone exceed the mean estimate of one fatality per plant year for the entire nuclear fuel cycle. This nuclear-to-coal comparison is presented solely to place the nuclear risk in perspective, and is not intended to suggest that electrical generation from coal is not safe. Another study, conducted in 1982, comparing risks on a per-megawatt/year basis found that using petroleum to generate electricity results in about 10 times more fatalities than nuclear powerplants, while use of natural gas in generating electricity results in about 75 percent fewer fatalities than nuclear. The safety record associated with the production of electricity from nuclear powerplants has been excellent and compares favorably with other electrical generation technologies.

It is frequently argued that the public's fear of nuclear power, despite its outstanding safety record, is due to the nature of the risk of nuclear accidents: that is, while the probability of an accident is very low, the potential for damage can be high. Upon further examination, however, this theory appears to explain only part of the public's fear of nuclear power. Otherwise, we would expect the public to have similar or even greater fears about many other situations and activities in which accidents have actually occurred. We need only cite some examples over the past 5 years. In

December 1984, methyl isocyanate leakage at a Union Carbide chemical plant in Bhopal, India, resulted in some 1,700 fatalities and 200,000 injuries. In November 1984, tanks of liquefied natural gas exploded at a storage facility in Mexico City, killing 452 people and injuring over 4,000 others. In February 1984, a leaky gasoline pipeline in Cubatao, Brazil, exploded, killing over 500 people. In July 1981, two aerial walkways collapsed at a hotel in Kansas City, Missouri, killing 114 people. A November 1980 hotel fire in Las Vegas, Nevada, resulted in 85 fatalities. These catastrophic accidents all occurred in non-nuclear related industries and activities.

Nuclear power is safe but it continues to raise public fears. Although there have been no deaths caused by the operation of commercial nuclear powerplants, safety concerns constitute the largest set of reasons for public opposition to nuclear power. Nuclear reactors are designed, built, and operated with multiple safety systems to protect against equipment failure, human error, and natural disasters. Redundant systems monitor, control, and support the safe operation of the reactor at each powerplant. A utility company planning to build a nuclear powerplant is responsible for assuring the public that the plant will be built and operated safely. An Environmental Impact Statement is prepared and approved as part of this process. In the nearly three decades that nuclear energy has been used to produce electricity, it has established itself as one of our safest and environmentally benign energy technologies.

Although the Three Mile Island accident was the worst incident in commercial reactor operating history, the Presidential Commission investigating the accident concluded that the radiation doses received by

the general population were so small that there would be no detectable additional cases of cancer, developmental abnormalities, or genetic ill-health as a consequence of the TMI accident. This Commission estimated that the maximum radiation dose was 70 millirems to any individual in the off-site population. For comparative purposes, natural background radiation, which the average American is exposed to each year, is approximately 80 millirems.

While the nuclear industry has a proven safety record, the lack of familiarity by the public with nuclear power and the attention given to any abnormal nuclear occurrence, however minor, continues to raise fears that have no factual basis. For example, immediately after Three Mile Island, a survey conducted by Resources for the Future found 52 percent of the public believed a nuclear powerplant could explode like an atomic weapon, even though such an occurrence is a physical impossibility. Based on other surveys, there are continuing fears and misconceptions associated with the possible escape of radioactivity from normal reactor operations. These fears and misconceptions are not supported by the proven safety record of the industry. Estimates indicate that the average yearly dose to the average American from the normal operation of nuclear powerplants is substantially less than 1 percent of his or her annual dose from natural radiation.

FOREIGN INDEMNIFICATION

Although there are countries that have financial protection systems that do not limit liability, the immediate financial protection afforded the public

in the United States is greater than in any other country. In the Federal Republic of Germany, indemnification is provided by private insurance, the government, and the plant operator. Private insurance and the government provide approximately $310 million of coverage. The plant operator then becomes liable for any claims in excess of this amount; however, at this point, payment is, of course, limited to the assets of the operator.

In Switzerland, private insurance and government indemnification provide for up to approximately $450 million of insurance. Additional amounts could be made available through the plant operator's assets. Lastly, if additional funds are still required to pay claims, the government will provide them but only after action by the Parliament. Two of the four nuclear powerplant operators in Switzerland are utilities that are largely government owned. Thus, the operator's assets are largely the government's assets and the Swiss Government would ultimately be responsible for compensating claims.

In the Japanese system of indemnification, the operator must carry $39 million in private insurance and there is no limit on its liability. In the event there are insufficient funds for payment of claims after the assets of the utility are exhausted, the Japanese Parliament will decide on the level of additional funds it will provide to pay claims.

FINANCIAL PROTECTION FOR DOE CONTRACTORS

Although the Department's contractors have compiled an excellent safety and health record over the last three decades, the nature of a nuclear accident

(i.e., high possible consequence and low probability) is such that some form of financial protection is necessary for them to continue doing business with the Department. In this regard, the Department continues to support the rationale upon which it based its 1983 recommendation to Congress:

> A system of financial protection that provides the Department with authority to indemnify its contractors and subcontractors involved in nuclear activities is necessary for the Department to carry out its statutory mission. Without some form of indemnification, contractors at all levels may well refuse to continue doing business with the Department.

Commercial nuclear power is vital to achieving our goals of energy strength, stability, and security. Approximately 15 percent of our electricity is produced by commercial nuclear powerplants. The Government commitment to nuclear power includes the safe management and transportation of nuclear waste materials, the safe economical enrichment of uranium, and financial protection for the public in the event of an accident. In order to facilitate the Department's congressionally mandated responsibility for managing nuclear waste activities, the Department also continues to support the rationale upon which the nuclear waste related recommendation was made in its 1983 report:

> All high-level waste activities should be covered explicitly by some system of financial protection. The states have expressed the concern that possibly not all high-level waste operations are covered under the Price-Anderson system. The Department of Energy believes that the financial protection system adopted by Congress that insures against losses from nuclear accidents should include a provision that removes any doubt on the part of the states that Nuclear Waste Policy Act operations are indemnified. Such a step would go a long way towards removing an obstacle to state cooperation.

FINANCIAL PROTECTION FOR NRC LICENSEES

The financial protection made available by the present Price-Anderson system balances the limited liability granted the nuclear plant operator and others who may be liable against more certain, rapid, and widely available compensation for the public. Any changes and reforms that would alter this balance should be considered with great care.

The Department, therefore, considers that two guiding principles should lie behind any proposal to modify Price-Anderson:

- Although government regulation of the nuclear industry already ensures safety to a greater extent than in any other industry, a balanced Federal system of financial protection should continue to exist. The primary reason for this guiding principle is the high consequence/low probability nature of nuclear accidents.

- Any system of financial protection, which simultaneously meets the needs of the public and of the industry, should balance these needs in some equitable manner. The Price-Anderson system has "worked" in its 28 years of existence because it has balanced the public's need and industry's need. The present system reflects the public's desire for financial protection against extraordinary nuclear occurrences and industry's concern for a limit on its liability. Congress has carefully balanced these needs in the past, resulting in a system under which industry guarantees the availability of a substantial insurance fund that allows for the timely compensation of all parties. This is

in stark contrast to other types of private protection with their attendant solvency problems. Also, in the case of an extraordinary nuclear occurrence, the waiver of defense provision would prohibit industry from using defenses that would otherwise preclude timely compensation and claimants would not need to prove who is at fault. In return for these unique benefits, Price-Anderson imposes a limitation on private liability.

A number of proposals have been made that would significantly alter the original intent of the Price-Anderson Act. One such proposal, S. 445, would: (1) remove the limitation on liability; (2) eliminate the 20-year statute of limitations on claims; and (3) eliminate the requirement that an "extraordinary nuclear occurrence" must be declared before defendants are required to waive legal defenses ordinarily available to them under state law. Adoption of the provisions in this proposal is not justified nor equitable, and represents, in effect, punitive treatment for the nuclear industry. Removing the limitation on liability would not make unlimited funds available for compensation in the event of a nuclear accident, since liable parties can only provide amounts up to the limits of their assets. Elimination of the statute of limitations presents a particularly perplexing legal situation, where suits could be brought decades after an event, well after any basis for equitable resolution has dissipated. Finally, the elimination of the concept of "extraordinary nuclear occurrence" would encourage and give unfair advantage to plaintiffs in lawsuits for even minor "incidents" having no real environment or health impact, because the nuclear industry would be presumed to be liable even if they were not. In effect, such a provision would declare every "incident"

to be equivalent to a serious nuclear accident for legal purposes, a position which has no technical merit. This is inconsistent with the practices followed in other industries; for example, although commercial airlines may carry $500 million liability insurance, claims against them are normally subject to state tort law without having to waive any legal defenses.

The Department does not support changes which would implement unlimited liability, eliminate the statute of limitations, or change the definition of an "extraordinary nuclear occurrence" in such a way as to make minor incidents equivalent to nuclear accidents.

Introduced by Senators McClure, Dole and Simpson, S. 1225 incorporates a number of important features into Price-Anderson and will affect DOE operations in four areas. First, S. 1225 would increase the financial protection available to the public as a result of DOE contractor activities to an amount equal to the financial protection available for NRC licensees. Under this proposal, the limitation on liability could approach $2.4 billion, depending on the number of licensed reactors and the retrospective premium assessed each reactor. Second, the bill would explicitly apply Price-Anderson to DOE activities involving the transportation, storage, or disposal of nuclear waste. Third, S. 1225 would establish a requirement for a Presidential Report as well as a mechanism for congressional review of DOE contractor accidents should liability claims exceed the amount of funds available under Price-Anderson. Fourth, the bill would extend the Department's authority to enter into indemnification agreements with DOE contractors for 25 years.

A system of financial protection that would include provisions similar to S. 445 would no longer balance the public's desire for rapid, certain, and widely available compensation and industry's need for liability protection. Society does not deprive any other enterprise of the benefit of tort law while imposing unlimited liability. It is unlikely that a system of financial protection that provides the public with prompt and certain payment could exist if the balance between the public's need and industry's need is not equitable. S. 1225 appears to reflect this important balance.

SUMMARY AND RECOMMENDATIONS

With regard to DOE contractors and operations, we recommend that:

1. A Federal system of financial protection covering persons who may be injured by a nuclear incident as well as persons who may be liable should continue to exist, but a limitation on liability should be retained. Such a system is necessary for the Department to carry out its statutory mission.

2. The waiver of defenses provision should explicitly apply to nuclear incidents connected with civilian and defense high-level waste and spent fuel facilities.

With regard to NRC licensees and commercial operations, the Department recommends that:

1. Even though the nuclear industry has an outstanding safety record, the potential risk of a high consequence nuclear accident--despite its low probability--has led to wide support for some form of special financial protection covering persons who may be injured and persons who may be liable. This special protection, with appropriate limitations on liability, should be continued.

2. There is the need for a balance between the special financial protection and benefits provided the public and the protection that industry has given up that would otherwise be available under tort law.

This concludes my statement, Mr. Chairman. I will be happy to answer any questions.

STATEMENT BY

BEN C. RUSCHE
DIRECTOR
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY

Mr. Chairman and Members of the Subcommittee

Thank you for the opportunity to participate in your important review of the Price-Anderson Act. I will focus my attention on the deliberations as they relate to indemnification of the Nation's high-level nuclear waste disposal program.

First, I would hasten to point out that we hold the view and operate with the recognition that present Price-Anderson coverage applies to the Department's high-level nuclear waste activities. Section 170 (d) of the Atomic Energy Act authorizes indemnification not only for nuclear reactors but for "other activities under contract for the benefit of the United States ...." Thus, the Department has executed contracts with the owners and generators of spent fuel and high-level waste under which DOE agrees to take title to the material and provide transportation to a DOE facility and dispose of such material; and those contracts stipulate that a Price-Anderson indemnity agreement will be included in DOE contracts for the operation of DOE facilities handling disposal of high-level waste and spent fuel. The agreement will apply to nuclear incidents at a control location, or in the course of transportation to or from a control location. The indemnity provisions will continue beyond the term of the disposal contracts. We are aware that some would be more comfortable if the present language of the statute were rewritten

for explicit coverage of nuclear waste activities for purposes of clarification. We support making the Price-Anderson coverage explicit to high-level radioactive waste program activities while restating our conviction that the present language of the Price-Anderson Act already permits indemnification coverage for nuclear waste operations.

One area deserving the particular attention of this Committee, however, is the waiver of defenses provision of Price-Anderson, which as presently written does not explicitly apply to nuclear waste activities. This Department supports language to clearly extend that provision to waste activities. The provision imposes what amourts to strict liability for any event found to be an extraordinary nuclear occurrence (ENO). This provision would be a great benefit to claimants in that it streamlines the processing of claims. The Department recommends that this extraordinary nuclear occurrence facilitation procedure be extended to apply to incidents connected with civilian and defense high-level waste and spent fuel activities including transportation, storage, and disposal operations.

With respect to whether the present Price-Anderson indemnification limitation is adequate to provide sufficent coverage for any incident which could possibly be anticipated in the nuclear waste field, I would refer back to the original intent of Price-Anderson. The Congress clearly intended, as explicitly provided in 42 USC Section 2210 (e) that, "in the event of a nuclear incident involving damages in excess of that amount of aggregate

liability, the Congress will thoroughly review the particular incident and will take whatever action is deemed necessary and appropriate to protect the public from the consequences of a disaster of such magnitude." I have seen no definitive method of arriving at a precisely appropriate upper limit for liability. It is my belief, however, that the Congress acted wisely in stipulating an upper limit for providing rapid, assured funds, while reserving for itself the responsibility to take whatever action may be called for in the future to assure that necessary public protection is provided.

The foregoing observations are also germane to whether an altogether separate scheme of indemnification is needed for high-level waste activities. To summarize, we think not for three reasons: The present system has been crafted in a sufficiently broad manner to encompass both defense and commercial high-level waste programs; the ENO provisions can be readily broadened to emcompass waste activities; and, the limit of total liability coverage is tied to a firm commitment by the Congress to revisit any incident where loss exceeds coverage to assure public protection.

Nuclear waste entails no inherently unique characteristics to warrant a separate system from other nuclear operations. In designing the Price-Anderson system, Congress has provided the public with an assured, substantial, and timely, source of funds for payment of claims in the event of a nuclear accident. This

broad concept has worked well; we believe that the system should be preserved and applied to the activities conducted in compliance with the Nuclear Waste Policy Act.

Finally, in consonance with what we understand to be the spirit and intent of that NWPA, the Department believes that liability coverage for high-level waste programs should be financed out of the Nuclear Waste Fund. As the Congress stipulated in the Nuclear Waste Policy Act of 1982, the Fund is financed by fees paid by those who will benefit from this program, those that have generated the wastes. This applies to high-level waste resulting from defense activities as well as that commercially generated since the President recently approved the Secretary of Energy's recommendation that high-level nuclear wastes generated in connection with national defense programs use the same deep-geologic permanent repositories to be developed for commercially generated nuclear waste. The exact cost breakouts for payments into the fund will have to be determined on the basis of discussions currently underway to develop an equitable cost-allocation system between the defense and commercial waste programs. It is from these revenues into the Fund that liability coverage should be provided.

Mr. Chairman, this concludes my testimony. I will be pleased to follow-up on any of these observations or to answer any questions.

ORAL STATEMENT OF

NUNZIO J. PALLADINO, CHAIRMAN

U.S. NUCLEAR REGULATORY COMMISSION

MR. CHAIRMAN, I AM PLEASED TO HAVE THIS OPPORTUNITY TO APPEAR BEFORE THIS SUBCOMMITTEE TODAY. WITH ME ARE MY FELLOW COMMISSIONERS AND MEMBERS OF THE NRC STAFF. WITH YOUR PERMISSION, I WOULD LIKE TO MAKE A BRIEF ORAL STATEMENT AND SUBMIT A LONGER, WRITTEN STATEMENT FOR THE RECORD.

AS YOU ARE AWARE, IN DECEMBER 1983 THE COMMISSION SUBMITTED TO CONGRESS THE REPORT ENTITLED, "THE PRICE-ANDERSON ACT -- THE THIRD DECADE." THE RECOMMENDATIONS IN THAT REPORT HAVE GENERATED CONSIDERABLE DISCUSSION IN THE INTERVENING MONTHS. TO REVIEW BRIEFLY, THE MAJOR RECOMMENDATIONS OF THE REPORT WERE AS FOLLOWS:

(1) THE REPORT RECOMMENDED THAT THE CONGRESS EXTEND THE PRICE-ANDERSON ACT BASED ON THE BELIEF THAT THE ACT PROVIDES A VALUABLE PUBLIC BENEFIT BY ESTABLISHING A SYSTEM FOR THE PROMPT

AND EQUITABLE SETTLEMENT OF PUBLIC LIABILITY CLAIMS RESULTING FROM A NUCLEAR ACCIDENT.

(2) THE REPORT RECOMMENDED THAT THE CONGRESS AMEND THE PRICE-ANDERSON ACT TO SUBSTITUTE AN ANNUAL LIMITATION ON LIABILITY FOR THE PRESENT ABSOLUTE LIMITATION AND TO RAISE THE MAXIMUM RETROSPECTIVE PREMIUM THAT CAN BE CHARGED FROM THE PRESENT $5 MILLION PER REACTOR TO $10 MILLION PER REACTOR. (IT SHOULD BE NOTED FOR THE RECORD THAT THE BODY OF THE 1983 REPORT CONTAINS LANGUAGE RECOMMENDING A LIMIT OF $10 MILLION PER REACTOR PER INCIDENT PER YEAR. HOWEVER, THE COMMISSION'S INTENTION, AS CORRECTLY STATED IN APPENDIX I OF THE REPORT AND SUBSEQUENTLY CONFIRMED BY THE STAFF, WAS TO RECOMMEND A FLAT LIMIT OF $10 MILLION PER REACTOR PER YEAR.)

(3) THE REPORT RECOMMENDED THAT THE CONGRESS RETAIN THE PRESENT STATUTORY LANGUAGE FOR THE FINDING OF AN EXTRACRDINARY NUCLEAR OCCURRENCE TO ESTABLISH A DEFINITIVE BASIS FOR

DISTINGUISHING VALID CLAIMS AND TO CONSERVE RESOURCES TO PAY FOR THESE CLAIMS. IN THIS REGARD, IT SHOULD BE NOTED THAT THE COMMISSION PUBLISHED ON APRIL 9, 1985, A PROPOSED RULE TO REDEFINE THE CRITERIA FOR AN EXTRAORDINARY NUCLEAR OCCURRENCE.

(4) THE REPORT RECOMMENDED THAT THE CONGRESS EXTEND THE STATUTE OF LIMITATIONS FOR FILING A PUBLIC LIABILITY CLAIM ARISING FROM A NUCLEAR ACCIDENT FROM 20 TO 30 YEARS IN ORDER TO PROVIDE GREATER ASSURANCE THAT LATENT INJURIES CAUSED BY A NUCLEAR ACCIDENT ARE PROVIDED PROTECTION UNDER THE PRICE-ANDERSON SYSTEM.

OF THESE RECOMMENDATIONS, THE ONE THAT HAS GENERATED THE MOST CRITICAL COMMENT IS THE PROPOSAL TO SUBSTITUTE AN ANNUAL LIMITATION ON LIABILITY FOR ACCIDENTS AT LARGE COMMERCIAL NUCLEAR POWER PLANTS FOR THE PRESENT ABSOLUTE LIABILITY LIMIT. INSTEAD OF THE COLLECTION OF A SINGLE RETROSPECTIVE PREMIUM PER REACTOR FOR EACH ACCIDENT AS UNDER THE PRESENT SYSTEM,

RETROSPECTIVE PREMIUMS WOULD BE COLLECTED YEAR AFTER YEAR UNTIL ALL OF THE PUBLIC LIABILITY CLAIMS RESULTING FROM AN ACCIDENT ARE PAID.

CRITICISM OF THIS APPROACH HAS BEEN TWOFOLD. THE MOST FUNDAMENTAL PERTAINS TO AN EQUITY QUESTION THAT ONLY CONGRESS CAN RESOLVE. IT IS ARGUED THAT THIS APPROACH WOULD CHANGE THE BALANCE OF EQUITIES SUPPORTING THE PRICE-ANDERSON SYSTEM, SHIFTING TO THE UTILITY INDUSTRY FROM THE TAXPAYERS (THROUGH THE CONGRESS) THE FULL COSTS OF A CATASTROPHIC NUCLEAR ACCIDENT. THIS IS A SERIOUS CONCERN AND ONE WHICH THE CONGRESS WILL HAVE TO ADDRESS CAREFULLY AS A MATTER OF PUBLIC POLICY. THE COMMISSION RECOGNIZES THAT IN ANY LEGISLATION A BALANCING OF EQUITIES MUST BE MADE BY THE CONGRESS AND THAT OTHER ALTERNATIVES, BASED ON A DIFFERENT BALANCE, MIGHT PROVIDE ADEQUATE ASSURANCE THAT ALL PUBLIC LIABILITY CLAIMS COULD BE PAID.

CRITICISM HAS ALSO BEEN DIRECTED AGAINST THE RECOMMENDATION BASED ON THE BELIEF THAT THE UTILITIES WOULD SUFFER A SEVERE ECONOMIC IMPACT IF THEY WERE ASSESSED AN ANNUAL $10 MILLION RETROSPECTIVE PREMIUM. IN RESPONSE TO THIS CRITICISM, THE NRC STAFF RECENTLY COMPLETED AN ANALYSIS OF THE FINANCIAL IMPACTS OF AN ANNUAL $10 MILLION ASSESSMENT ON A CROSS SECTION OF UTILITIES AND HAS CONCLUDED THAT SUCH AN ANNUAL ASSESSMENT WOULD NOT PLACE UNUSUAL FINANCIAL STRESS ON MOST LICENSEES. WITH YOUR PERMISSION, MR. CHAIRMAN, I WOULD LIKE TO OFFER A COPY OF THE NRC STAFF STUDY FOR THE RECORD. MEMBERS OF THE NRC STAFF ARE ALSO AVAILABLE TO RESPOND TO SUBCOMMITTEE QUESTIONS.

MR. CHAIRMAN, I WOULD SIMPLY NOTE THAT THESE ISSUES HAVE BEEN UNDER REVIEW BY THE COMMISSION. MOST RECENTLY, ON JUNE 20, 1985, THE COMMISSION HELD A PUBLIC MEETING TO RECEIVE COMMENTS FROM A VARIETY OF PARTIES ON PRICE-ANDERSON WITH PARTICULAR ATTENTION GIVEN TO THE LIABILITY LIMITATION ISSUE.

SINCE THE SUBMISSION OF THE 1983 REPORT TO CONGRESS, THERE HAS BEEN A CHANGE IN COMMISSION MEMBERSHIP AND TWO COMMISSIONERS HAVE REVISED THEIR POSITIONS. MY OWN SUPPORT OF ITS RECOMMENDATIONS CONTINUES. I HAVE ASKED EACH OF THE COMMISSIONERS TO PREPARE A STATEMENT OF HIS CURRENT POSITION.

ON MAY 24, 1985, SENATOR SIMPSON AND SENATOR MCCLURE INTRODUCED S. 1225, THE PRICE-ANDERSON ACT AMENDMENTS OF 1985. THE NRC STAFF HAS PREPARED AN ANALYSIS OF S. 1225, WHICH I WOULD ALSO LIKE TO SUBMIT FOR THE RECORD.

THIS CONCLUDES MY ORAL REMARKS, MR. CHAIRMAN.

STATEMENT OF

FREDERICK M. BERNTHAL, COMMISSIONER

U.S. NUCLEAR REGULATORY COMMISSION

CONCERNING PROPOSALS TO AMEND

THE PRICE-ANDERSON ACT

June 25, 1985

Mr. Chairman, there is little doubt that adoption of the Commission's original Price-Anderson recommendations would eventually provide sufficient funds to pay all claims that might arise from a nuclear accident. And while I may still consider the basic principle of that proposal sound, I have come to be convinced that it is predicated on an unrealistic world.

I recognize the concern that the proposal introduces the perception (if not the practical effect) of "unlimited liability" in the payment of claims. And there is the legitimate question of whether such payments would in fact be timely.

Finally, and perhaps most significantly, in the wake of recent events in the chemical industry and elsewhere, I have developed a profound and decisive skepticism over the wisdom of dangling an annually renewable $1 billion before the noses of some of this country's attorneys at tort law. I can envision the creation thereby of a whole new industry and special interest group -- legions of lawyers, sustained forever by an anually renewable $1 billion Price-Anderson stipend.

So while I supported the original Commission recommendation that was formulated before the beginning of my tenure, my views on this subject have departed from the Commission's 1983 position in one major respect, and with good reason. There is no doubt that an increase in the current retrospective premium of $5 million per incident should be increased to an amount two, three, or even four times as large. But for the reasons I have outlined, I now believe that provision should apply for a limited period of time after an accident.

There do indeed appear to be other (and better) solutions to the Price-Anderson problem, solutions which can both protect the public adequately and treat the industry fairly. While I continue to believe that many of the Commission's 1983 recommendations are sound, I have concluded that any new legislation should be crafted to achieve two primary objectives:

First, I would recommend that the pool of money available to pay compensatory damage claims be larger than suggested by some -- perhaps as much as $5 billion. Such a fund would assure that victims of an accident could receive compensation equal to or greater than that which would

exist if there were so-called "unlimited" liability. The "free-market" version of such unlimited liability would in reality be limited with resounding and painful finality by the net worth of the entity responsible for an accident,+ were normal tort principles to govern recovery. (In few if any cases does the practical, net liquid worth of a nuclear utility exceed $5 billion).

On the other hand, if the much talked over but seldom committed principle of a truly unlimited liability, unique to the nuclear power industry (as opposed to the assets-limited "unlimited liability" of a free market), were now to be mandated Act of Congress, then similar measures should be applied to other industries that may also have the potential for accidents with claims far exceeding their net liquid assets and insurance funds.

[Indeed, 1985 may be remembered as the year in which the chemical accident achieved the dubious distinction of becoming the new benchmark of industrial catastrophe. A major nuclear accident almost certainly would not have the life-threatening consequences of a Bhopal; its primary impact is likely to be economic -- with the potential for very large economic losses. And this, of course, is what Price-Anderson is designed to deal with.]

Viewed in this context, it seems unarguable that an injured public would be far better off with than without Price-Anderson.

Second, I believe that the goal of any legislation should be collection of the retrospective premiums in a timely manner. A one-time assessment may well be too large for many utilities to handle. However, if our staff is correct in its judgment that utilities would be able to handle up to $20 million per year, a fund as large as $5 billion could likely be amassed within three years after an accident, and certainly within five years. Such a plan would:

(1) provide for reasonably swift compensation for the public -- equitable compensation at least as rapid as that under the 1983 NRC proposal;

(2) be protective of the voluntary, retrospective premium structure for indemnification of the utilities involved, without jeopardizing their financial viability;

(3) eliminate the concern that an indefinite term for such retrospective premiums, as suggested by the NRC in 1983, represents an unjust and unreasonable burden on all utilities obligated to pay for the mistakes of one;

(4) dispense with the objection that such an indefinite term carries with it the perception (if not the practical reality) of "unlimited liability"; and importantly,

(5) limit the time the nation's practitioners of tort law would otherwise have to ply their trade in the event of a serious nuclear accident, and restrict the magnitude, if not the source of fees payable to counsel for the injured.

The last is a plain attempt to confine a germinating problem that, unchecked, could grow to destroy the concept of streamlined administrative compensation systems such as Price-Anderson. As I have indicated, it lies at the heart of my most recent thoughts on this subject.

In its 1983 report to Congress, the Commission recommended that Congress clarify the Price-Anderson statute to exclude the payment of costs of investigation, settlement, and defense of claims from the two levels of financial protection established in the Act. I strongly concur in that recommendation. Insurance company lawyers, whose job is to limit the recovery of damage claims, should not be paid from the same fund established to compensate the injured. That is an egregious flaw in the current legislation.

Indeed, in the past few years the application of tort law to large accidents of major public consequence has exhibited a disturbing evolution that is compelling, even to the most casual observer. It would be a mockery of the term "full compensation" if fully one third of the damages awarded from Price-Anderson funds were to wind up in the coffers of lawyers representing those victims. Under the Commission's 1983 proposal, the legal profession would continue to reap these now almost customary large monetary benefits from funds intended to compensate the victims of a disaster.

In modifying Price-Anderson, Congress should therefore consider mandating a system to provide the maximum possible expeditious compensation to victims of a nuclear accident -- compensation unencumbered either by the failings of a deteriorating tort-law system, or by the inclinations of some practitioners of tort law.

Finally, I recognize and strongly endorse the practical reality and probable necessity of ultimate Congressional involvement in the event of any accident of truly catastrophic proportions, including a nuclear accident that might exhaust all initial coverages available even under an amended Price-Anderson.

Having said all this, I must also say the industry does itself no good by sometimes giving the appearance of wanting to have its cake and eat it too in this matter. Arguing for strictly limited liability under Price-Anderson on the one hand, and for a large reduction in source term on the other is an illogic not likely to escape the man on the street.

If it is true that an accident at a nuclear plant would be no more serious than that at many other large industrial facilities, then the industry cannot afford to be perceived as resistant to normalizing adjustments in the Price Anderson premium level, and payment of all legitimate claims in an accident.

Some have long argued that the nuclear enterprise couldn't survive without the subsidy they saw implicit in the oft-maligned Price-Anderson legislation. But time has shown that no funds were <u>ever</u> paid by the federal government in connection with its Price-Anderson liability, and

in fact the government's share of that liability has steadily diminished to zero as new powerplants have come on line in recent years.

In fact, events of the past few years, and the major and real problems facing the chemical industry and the EPA lead to the ironic conclusion that, instead of being an embarrassing step-child of the nuclear enterprise, Price-Anderson may become a model for rapid, assured compensation of the public in the case of catastrophic accidents -- chemical, nuclear, or whatever.

The message being learned is that there is no such thing as unlimited liability for any industry, just as there is no such thing as unlimited compensation in real life. I believe time is proving Price Anderson to be enlightened, landmark legislation to protect the public from years of litigation, rather than to protect the industry from a bankruptcy that would still not compensate an injured public.

In connection with the Commission's consideration of this issue, I have also urged a major modification of the Commission's regulations defining "extraordinary nuclear occurrence". Even Three Mile Island fell far short of qualifying as an "ENO" but it did expose a number of fundamental flaws in the current definition of the term.

Quite simply, in my judgment an extraordinary nuclear occurrence should be determined instrumentally, by offsite surface contamination dose rate, or by dose integration, during the first 24 hours following a release -- a simple, inexpensive, and definitive solution to what is now a very complicated problem. The Commission's current defining regulation is a lawyer's dream and a plaintiff's (and licensee's) nightmare.

Finally, I cannot leave the subject of compensation without commenting briefly on the Silkwood case reviewed not long ago by the Supreme Court. In a 5-to-4 decision, the Court held that a state may award punitive damages against an entity regulated by the NRC for actions a jury finds negligent -- even though all NRC regulations may have been complied with.

In other words, every jury in America can now theoretically serve as its own Nuclear Regulatory Commission. Or, as the original judge in the Silkwood case so memorably charged his jury, "Your duty is to determine what constitutes the exercise of reasonable care in handling plutonium."

Congress should make clear that punitive damages are not to be paid with Price-Anderson insurance funds. If a licensee can insure against punitive damages, such damages lose all deterrent value as punishment. Nor, in my judgment, did Congress ever intend the Atomic Energy Act to deny an injured person the opportunity to recover punitive damages in cases where NRC standards have been violated.

And Congress should also seriously consider reaffirming in the Atomic Energy Act the principle missed by the Supreme Court in Silkwood, that a licensee fully in compliance with NRC regulations is not liable for punitive damages -- a principle made shambles by the Court's erroneous acceptance in Silkwood of that lower court judge's instruction to the jury to serve, in effect, as a local NRC.

STATEMENT OF COMMISSIONERS ROBERTS AND ZECH
ON THE SUBJECT OF THE PRICE-ANDERSON ACT
BEFORE THE SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT
SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

THE NRC'S 1983 PRICE-ANDERSON REPORT RECOMMENDED EXTENSION OF THE PRICE-ANDERSON ACT AND INCLUDED A NUMBER OF SUGGESTIONS FOR ITS IMPROVEMENT. FOR US, THE FUNDAMENTAL OBJECTIVE IN RECOMMENDING THE EXTENSION OF PRICE-ANDERSON AND THE INCLUSION OF A LIABILITY LIMIT, IS TO ASSURE THAT PRICE-ANDERSON WOULD CONTINUE TO FULFILL ITS PRIMARY OBJECTIVE OF PROVIDING TIMELY AND FULL COMPENSATION TO ANYONE INJURED AS THE RESULT OF AN ACCIDENT COVERED BY IT. THIS OBJECTIVE IS PARAMOUNT. THUS, LET ME SAY FROM THE OUTSET THAT NEITHER COMMISSIONER ZECH NOR I TOTALLY REPUDIATE THE NRC REPORT NOR DISAGREE WITH MUCH OF CHAIRMAN PALLADINO'S STATEMENT. HOWEVER, WE ARE NOT PERSONALLY CONFIDENT THAT UNLIMITED LIABILITY, EVEN WITH AN ANNUAL CAP, IS THE BEST APPROACH.

SINCE THE NRC REPORT WAS SUBMITTED IN 1983, THERE HAS BEEN A GREAT DEAL OF ATTENTION GIVEN TO THE NUCLEAR LIABILITY ISSUE. SEVERAL BILLS ARE NOW PENDING BEFORE THE CONGRESS TO EXTEND PRICE-ANDERSON AND MODIFY IT IN ONE RESPECT OR ANOTHER. MOREOVER, DURING THIS PERIOD, WE HAVE SEEN MUCH ACTIVITY RELATING TO PUBLIC LIABILITY ISSUES INVOLVING ASBESTOS-INDUCED INJURIES AND TOXIC WASTES, AND, UNFORTUNATELY, THERE WAS THE TRAGIC ACCIDENT IN BHOPAL, INDIA. THE BHOPAL INCIDENT UNDERSCORES THE VALUE OF HAVING A SYSTEM SUCH AS PRICE-ANDERSON TO PROVIDE PROMPT COMPENSATION. THE COMMISSION ALSO HAD A PUBLIC MEETING ON JUNE 20, 1985 WHERE SUPPORTERS OF THE DIFFERENT OPTIONS ON THE EXTENSION OF THE PRICE ANDERSON ACT NOW BEFORE THE CONGRESS EXPRESSED THEIR VIEWS TO THE COMMISSION. WE SINCERELY

APPRECIATE THE TIME AND EFFORT OF ALL OF THE REPRESENTATIVES WHO PRESENTED THEIR VIEWS AT OUR JUNE 20 COMMISSION MEETING ON THE PRICE-ANDERSON ACT. WE UNDERSTAND THEIR POSITIONS AND RESPECT THEIR VIEWS.

AFTER REFLECTING ON THESE EVENTS, COMMISSIONER ZECH AND I REAFFIRM OUR COMMITMENT TO THE OBJECTIVE OF ASSURING THAT TIMELY AND FULL COMPENSATION IS AVAILABLE FOR THOSE INJURED IN THE UNLIKELY EVENT OF THE NUCLEAR ACCIDENT COVERED UNDER PRICE-ANDERSON. TO US, ESTABLISHMENT OF A SYSTEM WHEREBY CONTRIBUTIONS TO THE COMPENSATION FUND ARE MADE OVER AN INFINITE PERIOD OF YEARS APPEARS INCOMPATIBLE WITH ASSURING THAT AN ADEQUATE FUND IS AVAILABLE TO MAKE TIMELY COMPENSATION PAYMENTS.

UNLIMITED LIABILITY, COUPLED WITH WAIVER OF DEFENSES AND AN EXTENDED STATUTE OF LIMITATIONS COULD ENCOURAGE FUTURE LITIGATION, OR THREATS OF LITIGATION, AND USAGE OF THE FUND TO REACH WHAT MAY BE UNJUSTIFIED SETTLEMENTS LONG AFTER AN ALLEGED NUCLEAR INCIDENT. WE DO NOT BELIEVE THAT UNLIMITED LIABILITY WILL NECESSARILY PROVIDE ANY BETTER ASSURANCE THAT INJURED MEMBERS OF THE PUBLIC WILL RECEIVE TIMELY AND FULL COMPENSATION. IT SEEMS TO US THAT THE POTENTIAL FOR UNLIMITED LIABILITY OVER A LONG PERIOD OF TIME MORE LIKELY THAN NOT WOULD RESULT IN MORE AGGRESSIVE DEFENSIVE EFFORTS TO RESIST TIMELY PAYMENTS. IN OUR JUDGMENT, THERE MUST BE SOME LIMIT TO THE SIZE OF THE COMPENSATION FUND, OTHERWISE WE ARE UNABLE TO UNDERSTAND WHY THERE WOULD BE ANY INCENTIVE FOR UTILITIES TO BE WILLING TO SHARE IN UNLIMITED INDUSTRY-WIDE LIABILITY FOR ACCIDENTS AT A PARTICULAR UTILITY'S FACILITY. THIS IS ESPECIALLY SO FOR A UTILITY WITH A LARGE NUMBER OF OPERATING REACTORS. WE ARE UNABLE TO UNDERSTAND WHY IT IS SOUND

PUBLIC POLICY FOR PUBLIC UTILITY CUSTOMERS IN ONE REGION OF OUR COUNTRY TO INCUR PROLONGED, UNLIMITED FINANCIAL OBLIGATIONS BECAUSE OF AN ACCIDENT ELSEWHERE. THIS IS ESPECIALLY SO FOR A UTILITY WITH A LARGE NUMBER OF OPERATING REACTORS.

THEREFORE, WE BELIEVE THAT THE OBJECTIVE OF FULL AND TIMELY COMPENSATION TO INJURED MEMBERS OF THE PUBLIC WOULD BE BETTER SERVED BY AN APPROACH ALONG THE FOLLOWING LINES:

- ASSURE THAT A SIZEABLE COMPENSATION FUND WITH A LIMITATION OF LIABILITY IS AVAILABLE IN A TIMELY MANNER. WE HAVE NO FORMULA TO CALCULATE WHAT THE SIZE OF THE COMPENSATION FUND SHOULD BE. NEVERTHELESS, PROVISIONS SHOULD BE IN PLACE WHICH WOULD ASSURE THAT THE FUND WOULD CONSIST OF THE SUM OF THE PRIVATE INSURANCE AVAILABLE REASONABLE RETROSPECTIVE PAYMENTS AND POSSIBLE FURTHER ASSESSMENTS, I.E., A MILLS PER KILOWATT ASSESSMENT ON NUCLEAR PLANTS IS ONE ALTERNATIVE. PROVISION ALSO COULD BE MADE FOR THE FUND TO INCREASE AT APPROPRIATE INTERVALS TO ACCOMMODATE ANY SIGNIFICANT INCREASES IN THE RATE OF INFLATION.

- IN OUR JUDGMENT, THE PROBABILITY OF AN ACCIDENT WHICH WOULD EXHAUST SUCH A FUND IS HIGHLY UNLIKELY. HOWEVER, SINCE SUCH POSSIBILITY CANNOT BE RULED OUT WITH ABSOLUTE CERTAINTY, WE BELIEVE THAT THE LEGISLATION SHOULD INCLUDE AN APPROPRIATE MECHANISM FOR FEDERAL GOVERNMENTAL CONSIDERATION OF THE APPROPRIATE ACTION TO BE TAKEN, CONSIDERING ALL RELEVANT CIRCUMSTANCES, IN THE EVENT A CATASTROPHIC

ACCIDENT DOES IN FACT OCCUR AND THERE IS REASON TO BELIEVE THAT THE AVAILABLE FUND IS NOT ADEQUATE TO PROVIDE FULL AND TIMELY COMPENSATION.

PERHAPS THE BHOPAL INCIDENT AND THE RESULTING RUSH TO THE COURTHOUSE IS THE BEST EVIDENCE OF THE NEED FOR THE CONGRESS TO BE INVOLVED IN DETERMINING WHAT IS THE MOST APPROPRIATE RESPONSE TO SUCH A CATASTROPHIC EVENT. IT IS OUR UNDERSTANDING THAT S.1225 IS CONSISTENT WITH THE RECOMMENDATIONS WE HAVE JUST DESCRIBED. WE CAN SUPPORT IT OR ANY OTHER ALTERNATIVE THAT ENSURES THE PUBLIC'S FINANCIAL PROTECTION BY HAVING AVAILABLE A FUND TO PAY THEM TIMELY AND FULL COMPENSATION.

STATEMENT BY JAMES K. ASSELSTINE

COMMISSIONER, U.S. NUCLEAR REGULATORY COMMISSION

BEFORE THE

SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT

SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

JUNE 25, 1985

Mr. Chairman, I have a few comments on the Commission's testimony and on S. 1225. My comments focus principally on the issue of whether to retain, modify or eliminate the limitation on liability now contained in the Price-Anderson Act. However, I also intend to touch briefly on the waiver of defenses provision in the Act. My comments will focus on the provisions of the Act which apply to NRC-licensed commercial power reactors.

As Chairman Palladino has noted, a key feature in the Commission's report to the Congress a year and a half ago was the Commission's recommendation that the Congress replace the present absolute limitation on liability in the Act with an annual limitation on liability. Under this approach, deferred premiums of $10 million for each operating reactor would be collected each year until all public liability claims resulting from a nuclear accident have been paid.

A unanimous Commission endorsed this annual limitation on liability approach as the best way of satisfying the public policy objectives of the

Price-Anderson Act, and four of the five Commissioners who voted for that recommendation are sitting in front of you today. Commissioner Zech was not a member of the Commission at the time the Commission made its recommendations to the Congress. I might add that the Commission made this recommendation that the Congress adopt an annual limitation on liability only after carefully considering a range of other options, including eliminating the limitation on liability altogether and retaining an absolute limitation on the industry's liability at some higher level than the $630 million in financial protection now provided under the Act. The latter option is quite similar to the approach contained in S. 1225.

Mr. Chairman, several weeks ago some members of the Commission began to reconsider their position on the limitation on liability. This process of reconsideration began with visits to each of us by representatives of a large nuclear utility. Those representatives, speaking on behalf of the nuclear industry, advised us that the industry would strongly oppose any effort to eliminate the absolute limitation on liability under the Price-Anderson Act, including the Commission's recommendation for an annual limitation on liability. They indicated that if the Commission did not abandon its recommendation for an annual limitation on liability the nuclear industry would oppose any extension of the Act and thus we would risk losing any increase in financial protection beyond that provided by the present provisions of the Price-Anderson Act. In the Commission's June 3, 1985 responses to questions from the House Subcommittee on Energy and the Environment, a majority of the Commission chose to abandon the

Commission's previous recommendation for an annual liability limit and instead to recommend that the Congress retain an absolute limitation on liability with a limited increase in the amount of financial protection for the public.

Mr. Chairman, I cannot agree with the Commission's change in position. I continue to believe, as did all the Commissioners in December 1983 when we issued our report to the Congress and in June 1984 when we first testified before the Congress on this issue, that the present absolute limitation on liability in the Act should be eliminated and should be replaced with an annual liability limit. In my view, proposals to retain, eliminate or modify the limitation on liability should be judged using the following four criteria:

- Does the proposal assure full compensation to the victims of a nuclear accident?

- Does the proposal provide an assured and timely source of funds to pay public liability claims?

- Does the proposal avoid imposing the costs of an accident at a nuclear powerplant on the Federal government?

- And, does the proposal avoid imposing a catastrophic financial burden on individual nuclear utilities?

The Commission's previous recommendation that the Congress adopt an annual liability limit meets each of these four tests. No matter how large the consequences of a nuclear accident, sufficient funds would automatically be available to pay all valid public liability claims. These funds would come from the nuclear utilities, and the only remaining federal role would be as guarantor in the event that a utility failed to pay its deferred premium. Substantial funding would be available to pay claims in the first year, and a flow of funds would be available in succeeding years to pay claims arising from latent injuries. Finally, by spreading the cost over succeeding years, the financial health of the utilities should not be jeopardized.

Unfortunately, the same cannot be said for the Commission majority's new proposal. Retaining the absolute liability limit would limit the financial impact of a nuclear accident on the utilities owning and operating nuclear powerplants. But it would also provide insufficient funds to pay all the valid claims of the victims of some nuclear accidents. At least two of my colleagues are advocating a liability limit of about $2 billion--an amount similar to the funding which would be provided under S. 1225. While this is better than the $630 million now available under the Act, it is not sufficient to cover the costs of all possible nuclear accidents. As the Commission's rather lengthy Indian Point proceeding made clear, there is a group of accidents which, although unlikely, could result in damages well in excess of the approximately $2 billion recommended by some of my colleagues and provided under S. 1225. If such an accident were

to occur, the funds available under the Act would not be sufficient to compensate fully all victims.

In that situation, the Congress would have to decide whether to provide further compensation to the victims of the accident and how to fund that additional compensation. Dealing with that question in the aftermath of a catastrophic nuclear accident will not prove to be an easy task. Indeed, one need look no farther than the Congressional consideration a few years ago of proposals to fund the cleanup of Three Mile Island Unit 2 to see the difficulties in trying to construct a funding scheme after an accident has occurred. The difficult arguments concerning federal funding and funding by other utilities and their ratepayers who had no part in causing the TMI accident as well as the resulting legislative impasse are, I think, all too familiar to the members of this Subcommittee. If we should learn one lesson from the TMI-2 cleanup experience, it is that we should endeavor to establish in advance a framework for compensating the victims of a nuclear accident that will provide full compensation for the public for all possible accident situations. While the expedited Congressional review procedures contained in S. 1225 may result in an early vote in the House and Senate on a supplemental funding scheme in the event of a catastrophic nuclear accident, they are not likely to make the issues any less controversial or the available choices more palatable. And the result could be another impasse.

Having guaranteed by law that the industry's liability would be fixed at about the $2 billion level, and with new indemnity contracts in effect

which reflect this limited liability, I think it is unlikely that the Congress would be successful in obtaining additional funding from the industry after an accident occurred. Thus, in all probability, additional funding to pay public liability claims--funding which could run into the billions of dollars--would have to come from the Federal Treasury.

Finally, with a fixed liability limit, some judgment would have to be made on how much of the available funds should be set aside to pay future claims for latent injuries when those injuries become apparent. Apportioning of the available funds has the potential to short-change either the victims with immediate injuries or those with latent injuries, or both. Indeed, given the need to set aside a portion of the funds available under an absolute liability scheme such as that contained in S. 1225 to pay claims for latent injuries, I doubt whether that bill would provide much, if any, additional funding to pay early public liability claims than would be available in the first year alone under the annual limit on liability approach recommended by the Commission in 1983. As the Commission recognized in its report to the Congress in December 1983, these disadvantages argue strongly against retaining the absolute limitation on liability and in favor of the annual liability limit approach.

Mr. Chairman, I have to add a comment on the nuclear industry's role in this debate over the limitation on liability. Quite frankly, I am very disappointed at the industry's opposition to the Commission's recommendation of the annual limitation on liability. I had hoped that the industry would see this as an opportunity to help assure full public

protection from all possible nuclear accidents, including the low probability but high consequence accidents that would lead to large public liability claims. I think that the industry's willingness to accept the residual financial risk of these accidents would also have helped build public confidence in the safety of nuclear power. In that vein, I find it somewhat difficult to reconcile the industry's repeated assurances over the past several months that the chance of a nuclear accident causing any injury to the public is so remote as to be incredible with their opposition to the removal of the absolute limitation on liability. While the increase in the absolute liability limit contained in S. 1225 and recommended by the Commission majority and the industry would be an improvement over the present Act, it would be a small step. It fails to achieve the broader public policy objectives that would be met by a more sweeping reform of the Price-Anderson system.

Mr. Chairman, I have one final comment on the extraordinary nuclear occurrence, or ENO, concept in the Price-Anderson Act. The Act establishes a subcategory of nuclear accidents which are identified as ENO's. An ENO is defined as a nuclear incident which involves: (1) substantial radiation doses or radioactive material at offsite locations; and (2) substantial actual or probable offsite damage to persons or property. If the Commission determines that a nuclear incident constitutes an ENO, the waiver of defenses provisions under the Act are activated. Under these provisions, a defendant must waive any issue or defense (1) as to the conduct of the claimant or fault of persons indemnified; (2) as to charitable or governmental immunity; or (3) based on any statute of

limitations if suit is instituted within three years from the date on which the claimant first knew, or reasonably could have known, of his injury or damage and the cause, but in no event more than 20 years after the date of the nuclear incident.

Our experience in attempting to determine whether the TMI-1 accident was an ENO identified a number of difficulties with our criteria for making the ENO determination. While the Commission has published a proposed rule with three possible options for improving our ENO criteria, I am not yet convinced that any of these rulemaking options will fully solve the problems. Nor am I convinced that the ENO concept and the preservation of these legal defenses for nuclear incidents which do not constitute an ENO necessarily provide a fair and equitable means for deterring frivolous claims, which is the principal basis used by the Commission majority in support of retaining the present approach. In fact, I suspect that these legal defenses can serve to bar recovery of legitimate as well as frivolous claims, and can result in nonuniform results depending upon the location of the accident. For these reasons, former Commissioner Gilinsky and I recommended in the Commission's 1983 report that the Congress eliminate the ENO concept from the Act and require the waiver of defenses for all nuclear incidents. This change would establish "no fault" coverage for all nuclear incidents, would assure more uniform determinations on recovery for public liability claims from nuclear incidents and would eliminate the difficulties in establishing practical and workable criteria for making ENO determinations. I continue to believe that these benefits support the elimination of the ENO concept and the extension of the waiver of defenses provision to all nuclear incidents. Thank you.

NRC STAFF ANALYSIS OF S. 1225

THE PRICE-ANDERSON ACT AMENDMENTS ACT OF 1985

Introduction

The Price-Anderson Act Amendments Act of 1985 (S. 1225) was introduced by Senators Simpson and McClure on May 24, 1985. As described by the Senators in the Congressional Record of that date the bill has four basic objectives:

1. Increase substantially the funds that will be available immediately to compensate the public in the event of an accident.

2. Ensure that the system established for collecting these funds is equitable and efficient.

3. Establish a reliable and efficient mechanism for providing whatever additional funds are required to compensate public liability claims in full should the funds immediately available be exhausted.

4. Ensure that the system established is comprehensive and covers all NRC licensee and contractor activities where there is a substantial risk of public liability from the handling of nuclear materials or the operation of nuclear facilities producing, using, storing or disposing of such materials.

The bill provides for four major changes of the Price-Anderson Act as it applies to NRC reactor licenses and four major changes with respect to DOE contractor activities.* With respect to NRC reactor licensees the bill would:

1. Direct NRC to carry out formal rulemaking to be completed within 12 months from the date of enactment of the Act for the purpose of determining a new level of retrospective premiums in the range of $10 million to $15 million to be charged each large reactor licensee.

2. Imposes an additional layer of financial protection to be available if the primary and secondary layers are exhausted. This third layer would consist of $500 million in coverage, to be funded by a fee of up to 1.0 mil per kilowatt hour on electricity generated and sold by licensed civilian nuclear power reactors. Here again the Commission would be required to complete formal rulemaking within one year of enactment of the Act to establish the terms and procedures for assessment and collection of the fee when it appears likely that the primary and secondary layers of protection would be exceeded.

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* There are also some less significant changes of a clarifying nature.

3. Establishes a mechanism to enable the President and the Congress to assess the consequences of an accident that results in public liability claims that exhaust the three mandated layers of coverage.

4. Extends the coverage of Price-Anderson by 25 years, to August 1, 2012, to currently licensed reactors and reactors licensed in the future.

For DOE contractors, the bill would:

1. Increase financial protection available to the public as a result of DOE contractor activities to an amount that is equivalent to the financial protection available for NRC reactor licensees.

2. Provides compensation for public liability claims that might arise out of nuclear waste activities.

   a. Provides that ir the event of a nuclear accident involving the Nuclear Waste Program the funds that will be immediately available for compensating the public will be equivalent to the funds provided in the event of an accident at an NRC-licensed reactor or for any other DOE-indemnified activity. Depending on whether commercial or defense wastes contributed to the accident, the source of funds would be the Nuclear Waste Fund established under the Nuclear Waste Policy Act or Federal indemnity, respectively.

b. Extends waiver of defenses to all nuclear waste activities undertaken by DOE.

3. Establishes a Congressional review mechanism, identical to the mechanism provided for NRC licensees,for assessing accidents involving DOE contractors that result in public liability claims that exceed the initial coverage mandated under the bill.

4. Extends DOE's authority to enter into indemnity agreements with its contractors by 25 years to August 1, 2012.

Analysis

While the staff has had a relatively short time to review S. 1225, it has been aided by the detail in which the bill has been drafted, the section-by-section summary included in the Congressional Record and the remarks of Senators Simpson and McClure in introducing the bill. In discussions in various fora, particularly the National Governors' Association sponsored meetings in which Senate staff drafters and NRC staff participated, the NRC staff was also able to gain some additional insight into particular provisions of the bill.

In general, the staff believes that the objectives of the bill, and the methods of achieving these objectives, are well considered and to a great extent can be broadly supported by the staff. Particular focus is

given in the analysis below to those elements that would increase the retrospective premium and that would impose a third layer of coverage.

In the course of this analysis the staff also reviewed the Commission's recommendations and analysis in NUREG-0957, December 1983*.

1. Increase Retrospective Premiums for NRC Licensees

The bill provides for an increase of the retrospective premium assessment from $5 million to a level to be determined by NRC of between $10 million and $15 million per reactor per incident.**

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*The Price-Anderson Act--The Third Decade, NUREG-0957, U.S. Nuclear Regulatory Commission, December 1983.

**NUREG-0957 postulates a situation in which there are 100 operating reactors assessed at $10 million per reactor per year for a total secondary financial protection layer of $1 billion. Together with the $160 million in primary insurance, a total of $1.16 billion was assumed to be available to pay claims each year for an unlimited number of years. S. 1225 is viewed favorably in that it provides some $2.4 billion in the first year. Of this amount, $500 million would be provided through a third layer (see discussion below). If one were to recalculate the NRC's projections in NUREG-0957 so that the secondary financial layer was based on 115 reactors assessed at $15 million per reactor as is done in S. 1225, a total of $1.725 billion in secondary financial protection would be available. By adding the primary insurance layer of $160 million a total of approximately $1.9 billion would also be available to pay claims in the first year.

It appears from available information that most utilities could handle an assessment of up to the maximum of $15 million from annual earnings without severe financial impacts. While it would appear that sufficient information to set the new level might already be available to the Congress, there may be benefits in setting the exact level by formal NRC rulemaking. Broad public comment might provide a fuller record to establish a basis for the level of assessment.

The staff has previously concluded that an assessment of $10 million per reactor per year would be manageable by most utilities.* The staff has not evaluated the level of $15 million specifically; however, it has completed an evaluation of a hypothetical effect of $10, $20, and $50 million assessment on 10 utilities for the years 1981, 1982, and 1983.** This study shows that a one-time assessment of $10 or $20 million could be managed by these utilities in each of these years, and therefore a $15 million assessment presumably would also be manageable.

These conclusions are reached by doing an analysis of earnings and an analysis of internal cash flow. Since for a one-time assessment, the cash flow is more important our comments will

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*NUREG-0957, Staff Subject Report, December 1983.

**Financial Analysis of Potential Retrospective Premium Assessments Under the Price-Anderson System, U. S. Nuclear Regulatory Commission, NUREG-1131, April 1985.

concentrate on that. It will be noted, however, that the general economic recession and high interest rates of this period (i.e. 1981-1983) placed financial stress on several of these utilities even without any post-loss assessments. Some of the utilities studied had financial indicators used by investors which made it difficult for them to obtain new debt and equity financing on favorable terms.

The most important financial measure for short-term financial capability is the internal cash flow--net income, depreciation on capital plant and equipment, fuel amortization, and various deferred taxes and credits. In doing this analysis, the staff deducted preferred and common dividend payments from cash flow because of the importance most utilities place on making reliable dividend payments to stockholders. In each of the three years each of these 10 utilities could have paid $20 million per reactor (and thus also $15 million), from internal cash flow. In an actual situation, other adjustments could be made, if needed, such as decreasing or eliminating dividend payments or by short-term borrowing. Furthermore, the staff has previously stated its view that it is likely that at some point these assessments would ultimately be allowed for most utilities to be recovered through rate charges to customers.

An important finding of the staff study is that even with a hypothetical $50 million assessment in 1983, most of these 10

utilities would perform nearly as well or better than with no assessment in 1981. Many utilities have suffered from poor performance, at least occasionally in recent years, which would be equivalent to a large assessment. But despite these setbacks they survived and were able subsequently to improve their financial health.

A final note of caution is warranted on assessment insurance. Based on what is now known, a $15 million or higher assessment could probably be handled by most utilities in most years. However, these same utilities also have post-loss assessment provisions in property and other insurance programs. A nuclear incident may trigger other assessment programs. Therefore, the level of liability assessment should not be set without taking into account the other programs.

2. Third Layer of Financial Protection for NPC Reactor Licensees

There are certain attractive features in this third tier layer of financial protection which would consist of $500 million in coverage funded by a fee of up to 1.0 mil per kilowatt hour on electricity generated and sold by licensed civilian nuclear power reactors following a nuclear incident. First, the fund would be assessed by the NRC, thereby possibly alleviating some of the uncertainty expressed by the utility industry as to whether state

public utility commissions would allow this expense to be passed through in rates. Second, the assessment of a fee based solely on electricity generated and sold by commercial nuclear power reactor licensees would impact most on utilities with a greater commitment to nuclear power generation. The staff notes, however, that following a serious accident a number of plants may be shut down for safety reasons. (This was the case for B&W plants after the TMI accident.) The extent and length of such shutdowns would have a marked affect on the time needed to collect the mil-assessment.

3. Mechanism for Presidential and Congressional Review to Assess Consequences of Accidents at NRC Licensed Reactors

S. 1225 provides a detailed description of the mechanism that the President and Congress would use in the highly improbable case of an accident that exhausts all financial protection mandated in the bill. The mechanism enlarges and provides more substance to the present provision in 170e. of the Price-Anderson Act that states that in the event of a nuclear incident involving damages in excess of the aggregate liability, the Congress will thoroughly review the particular incident and take whatever action is necessary and appropriate to protect the public from the consequences of a disaster of such magnitude.

One of the principal criticisms of the NRC's recommendation of an annual limitation liability has been that the role of Congress under the Price-Anderson Act to review the causes and consequences

of an accident and the need for further compensation would be removed. S.1225 would provide both the President and the Congress with vital roles in this area. If any limitation of liability is to be provided with respect to mandated layers of coverage, the staff believes that the proposed Presidential and Congressional review mechanisms provided in S.1225 are a major enhancement of the related provisions of the present Act.

The section-by-section summary of the bill states that the President's comprehensive report (which it is anticipated will be prepared in consultation with the NRC or DOE as appropriate) and the resulting Congressional action will focus, among other things on "determining what sources of funds should be considered to provide additional compensation." The staff believes that discussion of the degree to which this review mechanism will provide for full compensation will be aided if the drafters of the proposed legislation were to describe in more detail what sources of funds, other than appropriated funds, might be considered in this context.

4. Extend Price-Anderson Coverage for 25 Years for NRC Reactor Licensees

The Commission stated its belief in NUREG-0957 that in view of the strong public policy benefits in ensuring the prompt availability and equitable distribution of funds to pay public liability claims, the Price-Anderson Act should be extended to cover future as well

as existing nuclear power plants. The Commission also said that the same amount, type, and terms of public liability protection should be provided for future and existing plants (Page IV-2). In his remarks, Senator Simpson states his belief that all of the changes proposed in the bill for NRC licensees would apply equally to reactors currently licensed, as well as those reactors that might be licensed in the future. The staff believes that the period for which Price-Anderson is extended is a matter for which it has no special expertise but can see no objection to a 25-year extension.

5. DOE Liability Protection to be Equal to NRC Licensees

The issue of the inequality in financial protection for NRC and DOE activities has been difficult to justify in the past. Therefore, the staff supports the provision in S.1225 that provides and will continue to provide equivalent financial protection to the public in the event of a nuclear accident for DOE contractor activities and activities of NRC reactor licensee.

6. Compensation of Public Liability Claims Arising from Nuclear Waste Activities

The staff supports the provision for clearly stating that Price-Anderson covers all nuclear waste transportation, storage, and disposal activities. We support compensating the public in the event of an incident for all activities undertaken by the

Department of Energy, either directly or pursuant to a contract, involving the transportation, storage, or disposal of nuclear waste. We also support clarifying that omnibus provisions serve to indemnify any State or locality from potential public liability for nuclear waste activities.

Section 4 of the Bill provices that in the event of a nuclear incident involving the nuclear waste program, the Secretary of Energy is to determine the extent to which such an incident involves commercial and defense-related wastes. After he has determined what sources were involved, the Secretary then determines the appropriate source of funds for compensating public liability claims. (The commercial pro-rata share comes from the Nuclear Waste Fund, and the defense pro-rata share comes from federal indemnification.) However, in a severe accident involving both types of wastes, it might be difficult or even impossible to make a technical determination of what defense and commercial wastes were involved in the accident.

We defer to DOE on whether compensation of public liability claims arising from incidents involving commercial wastes should come from the Nuclear Waste Fund. It appears that an increase in the Nuclear Waste Fund fee could well be needed after an incident because it is not clear that this use of the Waste Fund was contemplated when the Nuclear Waste Policy Act was enacted.

Certain inconsistencies are posed by Section 4 of S. 1225 because of its connection with the NWPA Nuclear Waste Fund:

- o At present, under the NWPA the Waste Fund cannot be applied to storage or disposal of TRU wastes. (This is because of the Act's definition of "high-level," including a provision for NRC rulemaking which has not yet been pursued.) In contradiction to the NWPA's direction, Section 4 of S. 1225, however, would direct use of the Waste Fund relative to TRU wastes.

- o The waste storage and disposal activities which may be supported by the Nuclear Waste Fund will go on for many more than the 25 years proposed for extension of Price-Anderson provisions. For example, pursuant to current NRC regulation, there may be a period of up to 50 years after waste emplacement operations are initiated before a DOE repository may be licensed for permanent closure. After closure, the repository must be capable of containing wastes safely for thousands of years.

The staff supports the provision that extends the waiver of defenses to all nuclear waste activities undertaken by DOE.

7. Mechanism for Presidential and Congressional Review to Assess Consequences of Accidents at DOE Facilities

The staff's comments on the Presidential and Congressional review mechanisms for the consequences of accidents at NRC licensed facilities apply as well for the identical mechanisms to assess the consequences of accidents at DOE facilities.

8. Extend Price-Anderson Coverage for 25 Years for DOE Contractors

The staff believes that the period for which Price-Anderson is extended is a matter for which it has no special expertise but can see no objection to a 25-year extension.

9. Technical Redrafting of Price-Anderson Act

While the staff has not had sufficient time to analyze in detail the less significant redrafts of existing Price-Anderson provisions to eliminate unnecessary complexity and confusion, they appear to be helpful and successful in meeting their intent.

XI. ADDITIONAL VIEWS OF MR. McCLURE

The recent nuclear accident at Chernobyl, Russia, has been the subject of much speculation which, unfortunately, has produced generous outpourings of rhetoric and criticism about the nuclear industry in general. While it is still too early to assess the full consequences of that accident, in terms of the actual damage to the reactor, the extent of public injuries, and the effect on the public's attitudes, several conclusions can be safely drawn at this point, based on the following facts:

The nuclear plant at Chernobyl was designed without a containment structure surrounding the reactor. Each U.S. commercial reactor has a containment that is sufficiently strong to withstand earthquakes, tornados, and even an airplane crash.

The reactor at Chernobyl was designed without a pressure vessel; U.S. commercial reactors have thick steel pressure vessels.

The Chernobyl plant did not have adequate safety features such as backup emergency core cooling systems; U.S. commercial plants are built with a safety philosophy of "defense-in-depth," with emergency core cooling systems as just one example of the many redundant safety features incorporated in their designs.

The Chernobyl plant uses a graphite-moderated, water-cooled technology; the U.S. commercial nuclear industry uses a completely different technology based on water-moderated. water-cooled nuclear cores.

Soviet plants such as the one at Chernobyl are designed with what scientists refer to as a "positive reactivity coefficient" in the core, which means that any increase in temperature above normal operating temperature causes an increase in the nuclear chain reaction; all U.S. plants must be designed with a "negative reactivity coefficient," which means that any increase in temperature will cause the reactor power level to decrease.

In the Soviet Union, public input into issues of nuclear safety is virtually non-existent; in the U.S., the safety of the nuclear industry is subject to rigorous public scrutiny involving numerous opportunities for public input during the licensing process and after a plant is in operation.

The Chernobyl plant experienced at least partial core meltdown, resulting in public radiation exposure in the hundreds of rem; the 1979 accident at Three Mile Island Unit 2 near Harrisburg, Pennsylvania, caused meltdown of 70% of the reactor core, yet resulted in no significant offsite release of radiation.

What these facts tell me is that there are far greater differences than there are similarities between the Chernobyl accident and our own nuclear industry. Nevertheless, I am sure that some people will continue to convey the imagery of the Chernobyl accident to nuclear power plants in the U.S. Those who oppose the use of nuclear power in this country will seize upon the Chernobyl accident

to further their cause, in spite of the obvious conclusion that many aspects of the accident are simply irrelevant to the U.S. industry.

A perfect example of the criticism that has been generated by the Russian accident is the accusation that our Price-Anderson compensation system is grossly inadequate, and that we as legislators would be irresponsible if we failed to increase the coverage provided by the Price-Anderson Act to at least $10 billion, if not to unlimited amounts.

Yet the actual facts lead me to a totally different conclusion. They demonstrate that our nuclear industry is exceptionally safe, that the public is protected from even the worst-case accidents, and that we have probably been grossly overestimating the adverse consequences of a nuclear incident in this country all along. The facts tell me that an increase in Price-Anderson liability coverage from the present $660 million to a $2.5 billion figure, as is provided in S. 1225, is probably more than adequate to provide the necessary compensation to the public in the highly unlikely event that a serious nuclear incident should occur in this country. Yet, because the ratepayers and the taxpayers are willing to accept the responsibility of a much greater financial burden in the event of an accident, this Committee has chosen to increase the initial funds available under Price-Anderson to $2.5 billion per incident. This amount is four times greater than what is available under current law, and 100 times more than the total amount paid out in claims over the entire 30-year period since the Price-Anderson Act was originally enacted. Furthermore, we have gone a step further by providing in the bill a mechanism for enabling the Congress to act quickly on additional compensation measures, if needed, to provide for full relief of victims of a nuclear incident.

Unfortunately, no matter how convincing the facts are, there will still be those who will be dissatisfied with the Price-Anderson system, and they will point to Chernobyl as the evidence for their case. If the Congress succumbs to that argument, which is based on unfounded comparisons between two widely divergent technologies, we will end up demanding more of the Price-Anderson system than it can or should deliver. The end result would be the unravelling of all the progress that has been made so far to retain, renew, and enhance the Price-Anderson compensation system.

JAMES A. MCCLURE.

XII. ADDITIONAL VIEWS OF MR. DOMENICI

The Senate Energy and Natural Resources Committee reported the "Price-Anderson Act Amendments Act of 1986" (S. 1225) on April 23, 1986. Throughout the markup sessions, I have been involved in debate on each and every amendment except the last amendment considered by the Committee before the final Committee vote. I was necessarily absent, when Sen. Rockefeller offered his amendment on civil penalties, because of the floor action on the Budget Resolution. Sen. Rockefeller's amendment was adopted by a voice vote. Had I known about the adoption of this amendment, I would not have supported the report of S. 1225 by proxy. I have such strong objection to the civil penalties provision, that I must provide additional views on the subject.

The "civil penalties" provision provides to the Secretary of Energy the authority to impose civil penalties on Department of Energy contractors for nuclear incidents caused by contractors' gross negligence or willful misconduct. While the intent is to provide additional incentives for excellence in contractor performance, I have serious reservations that Price-Anderson is the appropriate legislative vehicle for such civil penalties provision. The fundamental principle of Price-Anderson is to provide prompt and adequate compensation to justified claimants without being bogged down by complicated tort law and excessive litigation as the cases may be under most liability suits. In order for Price-Anderson to function as intended, the contractors must forfeit their rights in defense, while DOE will have an obligation to defend and indemnify all liability that may arise under operation of the contract. Under this amendment, the fundamental principle of Price-Anderson has been altered. The added liability applied to the contractors by civil penalty will no longer be reimbursed by the DOE. The DOE would simultaneously be charged with defending the contractors in the liability suit and then later imposing civil penalties on contractors for wrongdoing. A conflict of interest could result from these two DOE responsibilities and the DOE will be put in an adverse position with its contractors.

In New Mexico, we have two outstanding national laboratories, Sandia National Laboratory and Los Alamos National Laboratory. These labs are operating under no profit contracts—in other words—they are providing a public service in the interest of national defense, and the exposure of such a penalty could provide enough disincentives for them to think twice about their contribution to the country.

Under this amendment, no provision is made for a hearing by a trial court on matters that are uniquely legal. The only provision is for a hearing by an Administrative Law Judge (ALJ) which does not provide the same rigorous requirement of proof and protection of the rules of evidence that a trial by a judge would provide. An

adverse decision by the ALJ, if upheld by the Appellate court, would be an irrefutable determination that the contractor had been grossly negligent. The contractor would be bound by the determination in all subsequent litigation; thus, opening up the possibility of massive liability based on the determination of a non-judicial officer.

While I fully support the need for bringing the Price-Anderson Act current on the liability cap, for the inclusion of coverage on waste management and disposal activities, and for the DOE to reimburse states for the costs of precautionary evacuations, I object to the distortion of the relationship between the DOE and its contractors by this amendment. Any provision for fining contractors should be in the enforcement chapter of the Atomic Energy Act or in the DOE Organization Act, not the Price-Anderson Act. Any civil penalty provision should contain a more definite and required relationship between the amount of the fine and the degree of culpability on the part of the contractors. Since this amendment also applies to subcontractors and suppliers, and the definition of nuclear incident includes precautionary evacuation, more consideration must be given to its potential impact on the willingness of small companies to do nuclear business with the DOE.

I hope when the full Senate considers S. 1225, we will fully understand the drastic implication this amendment would have on the fundamental principle of the Price-Anderson Act.

This issue is not only important to States like New Mexico, where two great national laboratories are located, but also to other States with laboratories and universities which are engaged in contracts with the DOE, and indeed, the well-being of the United States of America.

PETE V. DOMENICI.

XIII. MINORITY VIEWS OF MR. METZENBAUM

The citizens and communities near DOE nuclear facilities have made a serious commitment to national defense and energy security. They have a right to expect that the federal government will ensure their safety and guarantee full compensation in the event of a nuclear accident. The Committee bill does not provide such assurances. Throughout the Committee mark-up of the Price-Anderson legislation, I sought to ensure maximum protection and compensation for citizens affected by activities at federal nuclear facilities.

While the legislation adopted by the Committee does make some improvements over the current Price-Anderson law, it contains some major weaknesses: (1) it does not guarantee that victims of a nuclear accident will receive full and timely compensation for their damages; (2) the provisions designed to encourage contractor safety and accountability are weak and discretionary, and; (3) guilty parties are protected from punitive damage awards.

THE RIGHT TO FULL COMPENSATION

The Committee bill sets a cap ranging from $1.6 billion to $2.4 billion on the total amount of liability. This creates two serious problems. There is no evidence that this total will be sufficient to compensate victims for all damages which may be sustained by an accident. Most importantly, despite provisions for expedited Congressional procedures to consider additional assistance above the cap, there is no guarantee that victims have the right to full compensation.

The cap established in the Committee bill is a totally arbitrary number. No one knows what a serious accident will cost.

DOE says it doesn't know.

The General Accounting Office estimates damages could range as high as $100 billion.

The recent accident at the Chernobyl nuclear plant in Russia provides evidence that a nuclear accident can inflict widespread and costly damages.

The plain fact is that damages from a serious incident could exceed $2.4 billion. If this is the case, the limits set by the Committee will leave victims with little more than hope of full compensation.

While the Committee bill affirms the intent of Congress to fully compensate victims for all damages, the indisputable fact is that if total damages exceed $2.4 billion, victims have no legal right to full compensation. This is so for two reasons: the bill sets a limit on indemnification and total liability, effectively barring courts from making awards above the cap, and there is no legal obligation on Congress to provide funds above the limit set in the legislation.

Under the Committee bill, once compensation claims have reached the cap established in the bill, citizens are left to fend for themselves before Congress in order to gain full compensation. We know how difficult that can be, and with concerns about the deficit, there will be even more pressure to minimize assistance.

The Congressional Research Service (CRS) studied precisely this point, and concluded that under the Committee bill as modified by the Evans amendment, " . . . indemnification agreements would not, prior to congressional adoption of a plan, trigger any legal right to compensation beyond the liability cap." (CRS memo, March 25, 1986)

CRS did determine that removing the cap set in the bill would give victims the legal right to seek compensation above the cap, and a legal, contractual, obligation would be imposed upon Congress to fully indemnify all claims without limit.

Indeed, if it is the intent of the Committee to fully compensate all damages—as is stated in the findings of the bill—then setting a cap in the bill serves no purpose other than to slow down compensation by establishing a two-tier settlement process, and by denying the very right it claims to offer.

Removal of the liability cap would be consistent with current government policy in other areas.

PL 85-804 authorizes several federal agencies to provide indemnification without limit to contractors engaged in unusually hazardous and nuclear activities, when it facilitates the national defense.

NASA, the Department of Defense and even the FAA have used this law to indemnify contractors without limit.

Why should the public receive less protection from DOE nuclear activities than the activities of other agencies?

Currently, citizens and communities across the United States are being asked, and in many cases may be required, to serve as hosts for federal nuclear facilities and waste repositories. Other states are targeted as major transportation corridors for nuclear waste. It is only fair that in return for accepting these facilities, citizens be guaranteed the right to full compensation in the event of an accident. Lack of such assurance contributes to the difficulty of the siting process.

The National Governors Association has recognized the need for such protection, and has publicly endorsed the concept of unlimited liability. The Governors want assurance that their citizens will be fully compensated in the event of an accident.

The choice is clear: either eliminate the liability cap and guarantee citizens a right to full compensation, or adopt liability limits and tell citizens and communities that the government is not willing to guarantee full compensation for damages resulting from its activities.

CONTRACTOR LIABILITY

The current Price-Anderson Act shields contractors from all liability—no matter how reckless their behavior. The law guarantees that all contractors are "held harmless" for any damages resulting

form their activities, even if such damages are caused by gross negligence or willful misconduct.

The Committee bill contains a provision which provides the Secretary with the discretion to levy civil penalties up to $10 million against any contractor, subcontractor or supplier who causes an accident through gross negligence or willful misconduct.

While this is a slight improvement over existing law, I do not believe that it is strong enough. Imposition of a fine for gross negligence or willful misconduct should not be discretionary. Leaving open the possibility that a contractor may escape punishment significantly weakens the incentive to give more attention to safety. Additionally, the maximum limit of $10 million for any fine may not even represent a fraction of the true cost of a serious accident. There is no reason why federal taxpayers should bear any costs of an accident caused by gross negligence or willful misconduct on the part of a contractor.

I introduced an amendment, which was rejected by the Committee, requiring DOE to hold contractors liable for the costs of accidents caused by their gross negligence or willful misconduct. Under my amendment, DOE would initially indemnify the costs of accidents to ensure timely compensation to for the victim. However, if DOE determines the accident was caused by gross negligence or willful misconduct, it is required to recover the costs. This would ensure that contractors—and not the taxpayers—would bear the responsibility for patently unsafe practices and activities.

Contractors have claimed that such a proposal would expose them to great financial risk and discourage them from bidding for work at federal nuclear facilities. There is little merit to these claims.

Before passage of the Price-Anderson Act in 1957, many contractors working at federal nuclear facilities had some type of indemnity agreement with the government which excluded gross negligence and willful misconduct.

This included many contractors still in the business today: Westinghouse, Dupont, Goodyear, General Electric, Babcock and Wilcox, the University of Chicago and the University of California at Berkeley. Why should they be less accountable today than they were prior to 1957?

Indemnifying gross negligence or willful misconduct is also inconsistent with federal policies in other areas.

Most other federal laws which limit industry liability do not protect gross negligence or willful misconduct. These include the Clean Water Act, the Swine Flu Act, the Outer Continental Shelf Lands Act Amendments of 1978, the Warsaw Convention limiting liability of international air carriers, and the Superfund Act. Contractors at a federal nuclear facility should not be held to a weaker standard.

Indeed, some contractors who so adamantly reject attempts to be held accountable for gross negligence or willful misconduct under the Price-Anderson Act are willing to simultaneously perform other types of nuclear and ultrahazardous activities for the U.S. Government, under indemnity agreements which hold them liable for gross negligence and willful misconduct. For example, insome instances the Department of Defense engages contractors for nucle-

ar and ultrahazardous activities without providing indemnification for gross negligence or willful misconduct.

The fact that the Price-Anderson Act provides coverage for nuclear, or ultrahazardous, activity is not a justification for conveying favored treatment to contractors. If anything, the sensitive nature of the activity should require a higher standard of performance and a greater degree of contractor responsibility.

STRICT LIABILITY

Under current law, and the Committee bill, strict liability only applies to those accidents judged to be "Extraordinary Nuclear Occurrences" (ENO). Victims of accidents which do not meet the criteria for an ENO would be subject to regular state laws of tort and liability.

My amendment to apply strict liability to all nuclear accidents occurring at federal facilities failed on an 8–8 vote.

The determination of whether or not an accident is an ENO is based on a series of complex criteria relating to damage to persons and off-site property. The classification is a rather arbitrary process, and it is very possible that even a very serious accident would not be classified as an ENO. In fact, the accident at Three Mile Island was not classified as an ENO, leading the NRC to reconsider the criteria it employs. The situation is similar for DOE facilities.

The use of such a threshold for application of strict liability unfairly discriminates against victims of accidents, and implies the government obligation for compensation is not as great with respect to non-ENO's.

Citizens suffering damages should not be discriminated against based on the size of the accident. A person who suffers contamination of their drinking water suffers the same whether the total damages from an accident are $500,000 or $500 million. In short, compensation should be based on the merits of the claim, not on the size of the accident.

Under a strict liability standard for all nuclear accidents, citizens will still have to meet the burdens of causation and extent of damages before they can establish a valid claim. This is a substantial requirement which will discourage nuisance suits.

As the CRS notes, even in cases of an ENO, where strict liability already applies, the burden of proving causation is a formidable barrier.

> The point was made earlier, but is worth repeating, that even when an ENO occurs, a plaintiff seeking recovery must still show that (a) he was injured, and (b) his injury was caused by the ENO. The latter requirement may prove a substantial hurdle, in that some types of radiation-induced illness (such as cancer) may be indistinguishable from the effects of other environmental exposures (as through smoking). Showing causation becomes even more of a problem when a few decades have elapsed since the ENO. Indeed most legal commentators have concluded that persons suffering delayed radiation injuries face almost insurmountable barriers to recovery. (CRS, "The Price-Anderson Act: Legal Perspectives" February, 1986)

Once victims can prove causation and damages, the government should be ready to provide compensation.

PUNITIVE DAMAGES

The Committee bill contains an amendment which bars courts from awarding punitive damages against DOE contractors for an accident covered by an indemnity agreement under the Price-Anderson Act.

I share the concern of my colleagues that taxpayers shouldn't bear the costs of punitive damages levied against contractors who act in a willfully wanton or reckless manner.

However, the Committee amendment does much more than protect the taxpayer from liability for such damages.

It completely disallows any punitive damage awards and removes all contractor accountability for even the most irresponsible behavior. In adopting this amendment, the Committee has made a radical change in tort law. It has exempted one particular segment of the private sector from punitive damage suits. The Committee amendment provides unwarranted protection to parties guilty of reckless behavior, and removes a basic legal right accorded to victims. There is no justification for such unprecedented action from either a public policy or equity standpoint.

Indeed, the National Association of Attorneys General recently adopted a resolution opposing any amendments which would limit or remove the right of states to award punitive damage relief.

The other rationale for this amendment is to ensure Price-Anderson is consistent with the Federal Tort Claims Act—which bars punitive damages against the government.

The fact is that the Price-Anderson Act doesn't require the federal government to pay punitive damages. It allows DOE to indemnify, or repay, contractors for punitive damages, but it neither requires such indemnification, nor does it make the federal government subject to punitive damage suits.

Federal government liability for the payment of punitive damages is the result of DOE freely entering into agreements to indemnify contractors for such damages.

The solution is not to bar punitive damages, but simply to prohibit DOE from signing agreements indemnifying contractors for punitive damages.

Punitive damages were established to punish those who act with complete disregard for public health and safety. It is a right granted to victims, and is another incentive for contractors and companies to stress safety in their activities.

The current structure of Price-Anderson does not promote contractor safety. Totally eliminating the right of victims to seek punitive damages only makes a bad situation worse.

In sum, the Committee bill does make some improvements in the current law. It increases the limit of liability for a single nuclear accident from $500 million to a maximum of $2.4 billion, and authorizes the Secretary of Energy to impose civil penalties up to $10 million against any contractor causing a nuclear accident at a federal facility as a result of gross negligence or willful misconduct. The bill clarifies that full coverage is extended to all activities in-

volving the storage, transportation and disposal of nuclear waste, as well as accidents resulting from the theft or sabotage of nuclear materials. A mechanism has been established to reimburse state and local governments for the costs of precautionary evacuations, and the 20 year statute of limitations for filing a claim after an Extraordinary Nuclear Occurrence (ENO) has been replaced by a three year discovery rule.

However, as discussed above, several critical aspects of the Committee bill are fundamentally flawed. They must be corrected in order to establish the financial incentives necessary to ensure the safe operation of federal nuclear facilities and to guarantee timely and adequate compensation to victims if an accident does occur.

I intend to pursue these matters when the Committee bill is considered by the Senate.

HOWARD M. METZENBAUM.

XIV. Changes in Existing Law

In compliance with paragraph 12 of Rule XXV of the Standing Rules of the Senate, the Committee notes the following changes in existing law made by the bill S. 1225, as ordered reported (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, and existing law to which no changes is proposed is shown in roman):

Atomic Energy Act of 1954

* * * * * * *

Sec. 11. Definition.—The intent of Congress in the definitions as given in this section should be construed from the words or phrases used in the definitions. As used in this Act:

* * * * * * *

q. The term "nuclear incident" means any occurrence, including an extraordinary nuclear occurrence, within the United States causing, within or outside the United States, bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct material: *Provided, however,* That as the term is used in subsection 170 l., it shall include any such occurrence outside the United States: *And provided further,* That as the term is used in subsection 170 d., it shall include any such occurrence outside the United States if such occurrence involves source, special nuclear, or byproduct material owned by, and used by or under contract with, the United States: *And provided further,* That as the term is used in subsection 170 c., it shall include any such occurrence outside both the United States and any other nation if such occurrence arises out of or results from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct material licensed pursuant to chapters 6, 7, 8, and 10 of this Act, which is used on connection with the operation of a licensed stationary production or utilization facility or which moves outside the territorial limits of the United States in transit from one person licensed by the Commission to another person licensed by the Commission[.]*: And provided further, That as the term is used in Section 170, it shall include precautionary evacuations.*

r. The term "nuclear material" means, for purposes of section 170, source material, special nuclear material, byproduct material, or radioactive waste as defined in this section.

[r.] *s.* The term "operator" means any individual who manipulates the controls of a utilization or production facility.

[s.] *t.* The term "person" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission, any

State or any political subdivision of, or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing. *For purposes of those activities that the Secretary of Energy is authorized or directed to undertake, pursuant to this Act or any other law, that involve the risk of public liability for a nuclear incident as a result of the storage or disposal of, or research and development on, radioactive waste including the transportation of such materials to a storage or disposal site or facility, and the construction and operation of any such site or facility, the Secretary shall, to the extent that such activities are not undertaken by contract, be considered as if the Secretary were a contractor with whom an indemnity agreement has been entered into pursuant to subsection 170 d. of this Act.*

[t.] *u.* The term "person indemnified" means (1) with respect to a nuclear incident occurring within the United States or outside the United States as the term is used in subsection 170 c., and with respect to any nuclear incident in connection with the design, development, construction, operation, repair, maintenance, or use of the nuclear ship Savannah, the person with whom an indemnity agreement is executed or who is required to maintain financial protection, and any other person, *as defined in subsection (t),* who may be liable for public liability or (2) with respect to any other nuclear incident occurring outside the United States, the person with whom an indemnity agreement is executed and any other person who may be liable for public liability by reason of his activities under any contract with the Commission or any project to which indemnification under the provisions of subsection 170 d., has been extended or under any subcontract, purchase order, or other agreement, of any tier, under any such contract or project.

v. The term "precautionary evacuation" means an action taken by a State or local government official to evacuate the public in the vicinity of a facility or transportation route involving activities under the risk of public liability for a nuclear incident, which is deemed necessary to protect the public health and safety from danger, or threat thereof, of a nuclear incident.

[u.] *w.* The term "produce," when used in relation to special nuclear material, means (1) to manufacture, make, produce, or refine special nuclear material; (2) to separate special nuclear material from other substances in which such material may be contained; or (3) to make or to produce new special nuclear material.

[v.] *x.* The term "production facility" means (1) any equipment or device determined by rule of the Commission to be capable of the production of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public; or (2) any important component part especially designed for such equipment or device as determined by the Commission.

[w.] *y.* The term "public liability" means any legal liability arising out of or resulting from a nuclear incident, except: (i) claims under State of Federal workmen's compensation acts of employees of persons indemnified who are employed at the site of and in connection with the activity where the nuclear incident occurs;

(ii) claims arising out of an act of war; and (iii) whenever used in subsections 170 a., c., and k., claims for loss of, or damage to, or loss of use of property which is located at the site of and used in connection with the licensed activity where the nuclear incident occurs. "Public liability" also includes damage to property of persons indemnified: *Provided*, That such property is covered under the terms of the financial protection required, except property which is located at the site of and used in connection with the activity where the nuclear incident occurs.

z. The term "radioactive waste" means, for purposes of section 170, spent nuclear fuel, high-level radioactive waste, transuranic waste, or low-level waste whose disposal is a Federal responsibility.

[x.] *aa.* The term "research and development" means (1) theoretical analysis, exploration, or experimentation; or (2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes.

[y.] *bb.* The term "Restricted Data" means all data concerning (1) design, manufacture, or utilization of atomic weapons; (2) the production of special nuclear material; or (3) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 142.

[z.] *cc.* The term "source material" means (1) uranium, thorium, or any other material which is determined by the Commission pursuant to the provisions of section 61 to be source material; or (2) ores containing one or more of the foregoing materials, in such concentration as the Commission may by regulation determine from time to time.

[aa.] *dd.* The term "special nuclear material" means (1) plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing, but does not include source material.

[bb,] *ee.* The term "United States" when used in a geographical sense includes all Territories and possessions of the United States, the Canal Zone and Puerto Rico.

[cc.] *ff.* The term "utilization facility" means (1) any equipment or device, except an atomic weapon, determined by rule of the Commission to be capable of making use of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public, or peculiarly adapted for making use of atomic energy in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public; or (2) any important component part especially designed for such equipment or device as determined by the Commission.

* * * * * * *

SEC. 170. INDEMNIFICATION AND LIMITATION OF LIABILITY.—

a. Each license issued under section 103 or 104 and each construction permit issued under section 185 shall, and each license issued under section 53, 63, or 81 may, for the public purposes cited in subsection 2 i. of the Atomic Energy Act of 1954, as amended, have as a condition of the license as requirement that the licensee have and maintain financial protection of such type and in such amounts as the Commission in the exercise of its licensing and regulatory authority and responsibility shall require in accordance with subsection 170 b. to cover public liability claims. Whenever such financial protection is required it may be a further condition of the license that the licensee execute and maintain an indemnification agreement in accordance with subsection 170 c. The Commission may require, as a further condition of issuing a license, that an applicant waive any immunity from public liability conferred by Federal or State law.

b. *(1)* The amount of financial protection required shall be the amount of liability insurance available from private sources, except that the Commission may establish a lesser amount on the basis of criteria set forth in writing, which it may revise from time to time, taking into consideration such factors as [the following: (1)]

(A) the cost and terms of private insurance, [(2)]

(B) the type, size, and location of the licensed activity and other factors pertaining to the hazard, and [3]

(C) the nature and purpose of the licensed activity.[: *Provided,* That for] *For* facilities designed for producing substantial amounts of electricity and having a rated capacity of 100,000 electrical kilowatts or more, the amount of financial protection required shall be the maximum amount available at reasonable cost and on reasonable terms from private sources. Such financial protection may include private insurance, private contractual indemnities, self-insurance, other proof of financial responsibility, or a combination of such measures and shall be subject to such terms and conditions as the Commission may, by rule, regulation, or order, prescribe.

(2)(A) In prescribing such terms and conditions for licensees required to have and maintain financial protection equal to the maximum amount of liability insurance available from private sources, the Commission shall, by rule initially prescribed not later than twelve months from the date of enactment of [this Act,] *the Price-Anderson Act Amendments Act of 1986,* include, in determining such maximum amount, private liability insurance available under an industry retrospective rating plan providing for premium charges deferred in whole or major part until public liability from a nuclear incident exceeds or appears likely to exceed the level of the primary financial protection required of the licensee involved in the nuclear incident: [*Provided,*] That such insurance is available to, and required of, all of the licensees of such facilities without regard to the manner in which they obtain other types or amounts of such financial protection. [: *And provided further,* That the] *The* standard deferred premium which may be charged following any nuclear incident under such a plan shall be not less than [$2,000,000] *$15,000,000* nor more than [$5,000,000] *$20,000,000* for each facility required to maintain the maximum amount of financial protection.[:]

For each calendar year after the year of the enactment of the Price-Anderson Act Amendments Act of 1986, the Commission shall adjust the standard deferred premium under this subparagraph to reflect the effects of inflation for the previous calendar year as measured by the annual percentage change during such previous year in the implicit price deflator for the Gross National Product as published by the United States Department of Commerce. [*And provided further,* That the]

(B) The amount which may be charged a licensee *under the industry retrospective rating plan required pursuant to subparagraph (A)* following any nuclear incident shall not exceed the licensee's pro rata share of the aggregate public liability claims and costs arising out of the nuclear incident. Payment of any State premium taxes which may be applicable to any deferred premium provided for in this Act shall be the responsibility of the licensee and shall not be included in the retrospective premium established by the Commission. The Commission is authorized to establish a maximum amount which the aggregate deferred premiums charged for each facility within one calendar year may not excceed. The Commission may establish amounts less than the standard premium for individual facilities taking into account such factors as the facility's size, location, and other factors pertaining to the hazard.

(C) The Commission shall establish such requirements as are necessary to assure availability of funds to meet any assessment of deferred premiums within a reasonable time when due, and may provide reinsurance or shall otherwise guarantee the payment of such premiums in the event it appears that the amount of such premiums will not be available on a timely basis through the resources of private industry and insurance. Any agreement by the Commission with a licensee or indemnitor to guarantee the payment of deferred premiums may contain such terms as the Commission deems appropriate to carry out the purposes of this section and to assure reimbursement to the Commission for its payments made due to the failure of such licensee or indemnitor to meet any of its obligations arising under or in connection with financial protection required under this subsection including without limitation terms creating liens upon the licensed facility and the revenues derived therefrom or any other property or revenues of such licenesee to secure such reimbursement and consent to the automatic revocation of any license.

c. *(1)* The Commission shall, with respect to licenses issued between August 30, 1954, and August 1, [1987] *2012*, for which it requires financial protection of less than $560,000,000, agree to indemnify and hold harmless the licensee and other persons idemnified, as their interest may appear, from public liability arising from nuclear incidents which is in excess of the level of financial protection required of the licensee. The aggregate indemnity for all persons indemnified in connection with each nuclear incident shall not exceed $500,000,000 excluding costs of investigating the settling claims and defending suits for damage: *Provided, however,* That this amount of indemnity shall be reduced by the amount that the financial protection required shall exceed $60,000,000.

(2) Such a contract of indemnification shall cover public liability arising out of or in connection with the licensed activity.

(3) With respect to any production or utilization facility for which a construction permit is issued between August 30, 1954, and August 1, [1987] *2012*, the requirements of this subsection shall apply to any license issued for such facility subsequent to August 1, [1987.] *2012*.

d. *(1)(A)* In addition to any other authority the [Commission] *Secretary of the Department of Energy (hereinafter in this section referred to as the Secretary)* may have, the [Commission] *Secretary* [is authorized] *shall* until August 1, [1987,] *2012*, to enter into agreements or indemnification with its contractors for the construction or operation of production or utilization facilities or other activities under contracts for the benefit of the United States involving activities under the risk of public liability for a [substantial] nuclear incident. *Such agreements will indemnify such contractors for all public liability resulting from a nuclear incident.*

(B)(i) Under the authority conferred pursuant to subparagraph (A), the Secretary shall enter into agreements of indemnification with all contractors engaged in activities relating to the disposal, storage, or transportation of, or research and development on, radioactive waste, including activities pursuant to the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10101 et. seq.) and activities authorized as the Waste Isolation Pilot Project (Project 77-13-f) pursuant to fiscal year 1980 Department of Energy for National Security Programs Appropriations (Public Law 96-164).

(ii) For the purpose of compensating public liability claims, as defined in section 77, of this Act, arising out of activities authorized under the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10101 et. seq.) and funded by the Nuclear Waste Fund, including the transportation of such materials to a storage or disposal site or facility, and the construction and operation of any such site or facility, the Secretary shall make available funds in an amount not to exceed the maximum amount of financial protection required of licensees pursuant to subsection 170a., from the Nuclear Waste Fund established pursuant to section 302 of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10222). Such funds which are to be made available by the Secretary shall not be subject to appropriations pursuant to section 302(e)(2) of such Act. If sufficient amounts are not available in the Nuclear Waste Fund to fully and efficiently compensate all valid claims for public liability under this subsection, the Secretary shall exercise the authority provided in subsections a(4) and e(5) of section 302 of such Act.

(iii) Public liability claims arising out of activities involving the transportation, storage or disposal of, or research and development on, all other nuclear waste that is a Federal responsibility but not specified in clause (ii), including all activities authorized for the Waste Isolation Pilot Plant under Public Law 96-164 and including the construction and operation of any such site or facility, shall be compensated in accordance with the provisions of this Act, and from the same source of funds applicable to all other contractors indemnified pursuant to this subsection.

(2) in [such] agreements of indemnification *entered into pursuant to subsection 170 d. (1), the* [Commission] *Secretary* may require its contractor to provide and maintain financial protection of such a type and in such amounts as the [Commission] *Secretary*

shall determine to be appropriate to cover public liability arising out of or in connection with the contractual activity, and shall indemnify the persons indemnified against such claims above the amount of the financial protection required, in [the] *an amount* [of $500,000,000,] *equal to the maximum amount of financial protection required of licensees pursuant to subsection 170a.*, excluding costs of investigating and settling claims and defending suits for damage in the aggregate for all persons indemnified in connection with such contract and for each nuclear incident: *Provided,* That this amount of indemnity shall be reduced by the amount [that] *of* the financial protection *that the Secretary requires of the contractor.* [required shall exceed $60,000,000:]

(3) Notwithstanding paragraph (2) of this subsection, if the maximum amount of financial protection required of licensees pursuant to subsection 170.a. is increased by the Commission, the amount of indemnity, together with any financial protection required of the contractor, shall at all times remain equal to the maximum amount of financial protection required of licensees pursuant to subsection 170a. The amount of indemnity provided contractors pursuant to this subsection shall not, at any time, be reduced in the event that the maximum amount of financial protection required of licensees is reduced.

[*Provided further,* That in]

(4) In the case of nuclear incidents occurring outside the United States, the amount of the indemnity provided by the [Commission] *Secretary pursuant to this subsection* shall not exceed $100,000,000.

(5) The provisions of this subsection may be applicable to lump-sum as well as cost-type contracts and to contracts and projects financed in whole or in part by the [Commission.] *Secretary.*

(6) A contractor with whom an agreement of indemnification has been executed and who is engaged in activities connected with the underground detonation of a nuclear explosive device shall be liable, to the extent so indemnified under this section, for injuries or damage sustained as a result of such detonation in the same manner and to the same extent as would a private person acting as principal, and no immunity or defense founded in the Federal, State, or municipal character of the contractor or of the work to be performed under the contract shall be effective to bar such liability.

(7) Such agreements entered into pursuant to paragraph 170 d. (1) shall include reimbursement for costs of precautionary evacuations ordered by a State or local official provided that such evacuation is deemed reasonable, given due consideration to information available to the State or local officials at the time of the decision to evacuate, in any one of the following manners:

(A) prior to the evacuation, by the Secretary of Energy or his designee agreeing with the decision;

(B) subsequent to the evacuation, by the Secretary of Energy or his designee agreeing with the evacuation decision, no later than sixty days after issuance of the evacuation order; or

(C) if subsequent to the evacuation and in the event that the Secretary does not agree within sixty days after issuance of the evacuation order, by agreement with the evacuation decision by

a panel consisting of three members, one appointed by the Nuclear Regulatory Commission, one appointed by the Administrator of the Federal Emergency Management Administration, and one appointed by the Governor of the State in which the precautionary evacuation took place. The Panel shall have sixty days to make its decision.

(8) A contractor with whom an agreement of indemnification has been executed pursuant to this subsection shall be liable, to the extent so indemnified under this section, for injuries or damage sustained as a result of such activities in the same manner and to the same extent as would a private person acting as principal, and no immunity or defense founded in the Federal, State, or municipal character of the contractor or of the work to be performed under the contract shall be effective to bar such liability.

(9) In the event that a nuclear incident involving a contractor with whom the Secretary has entered into an agreement of indemnification pursuant to this subsection results in valid public liability claims in excess of the aggregate liability determined pursuant to subsection 170 e., full compensation shall be accomplished pursuant to subsection 170 i.

10(A) Subsequent to a nuclear incident that is covered by an agreement of indemnification under this subsection, the Secretary, on his own motion or upon petition of a person affected by such incident, may determine whether gross negligence or willful misconduct on the part of any contractor who is a party to such agreement, or on the part of any subcontractor or supplier of such contractor, caused the incident. Any decision of the Secretary not to make a determination under this subparagraph shall be within the Secretary's discretion, may be made without an agency hearing, and shall not be subject to judicial review. If the Secretary decides to determine whether gross negligence or willful misconduct caused a nuclear incident under this subparagraph, such determination shall be made only after notice and opportunity for an agency hearing under section 554 of title 5, United States Code before an administrative law judge appointed under section 3105 of such title. If the Secretary determines under this subparagraph that gross negligence or willful misconduct on the part of any contractor, subcontractor or supplier caused the nuclear incident, the Secretary may, by order, assess against any such contractor, subcontractor or supplier, or any legal successor thereof, a civil penalty in an amount not to exceed $10,000,000.

(B) The amount of the civil penalty assessed under this paragraph shall not exceed the amount determined by the Secretary to reasonably reflect the extent to which any gross negligence or willful misconduct found by the Secretary contributed to the damage or cost to the public from such incident and the magnitude of such damage or cost. Such assessment order shall include any findings of the administrative law judge under subparagraph (A) and a statement of the Secretary setting forth the basis for the amount of the penalty assessed.

(C) Any person against whom a penalty is assessed under this paragraph may, within sixty days after the date of the Secretary's assessment order, institute an action in the United States court of appeals for the appropriate judicial circuit for review of the assess-

ment. The court shall have authority to review such order in accordance with Chapter 7 of title 5, United States Code, and shall have jurisdiction to enter a judgment affirming, modifying, or setting aside, in whole or in part, such assessment, or the court may remand the proceeding to the Secretary for such other action as the court may direct.

(D) If any person fails to pay an assessment of a civil penalty under this paragraph without appealing the assessment under subparagraph (C) or fails to pay such an assessment after a court has entered a final judgment under such subparagraph, the Secretary shall institute an action in any appropriate district court of the United States to recover the amount of such penalty. In such action the validity or appropriateness of the final assessment or judgment shall not be subject to review.

(E) No amounts collected from any person by the Secretary under this paragraph may be reimbursed directly or indirectly to such person by the Secretary.

e. *(1)(A) With respect to nuclear incidents involving—*

(i) licensees required to have and maintain financial protection equal to the maximum amount of liability insurance available from private sources, and

(ii) contractors with whom the Secretary has entered into an agreement of indemnification, pursuant to subsection 170.d.,

[e. The] *the* aggregate liability for a single nuclear incident of persons indemnified, including the reasonable costs of investigating and settling claims and defending suits for damage, shall not exceed [(1) the sum of $500,000,000 together with] the *maximum* amount of financial protection required of [the] licensees [or contractor or (2) if the amount of financial protection required of the licensee exceeds $60,000,000 such aggregate liability shall not exceed the sum of $560,000,000 or the amount of financial protection required of the licensee, whichever amount is greater: *Provided,* That in] *pursuant to subsection 170 a.: Provided, however, That the aggregate liability for nuclear incidents involving contractors with whom the Secretary has entered into an agreement of indemnification, pursuant to subsection 170 d., shall not, at any time, be reduced in the event that the amount of financial protection required of licensees required to have and maintain financial protection equal to the maximum amount of liability insurance available from private sources is reduced.*

(B) With respect to nuclear incidents involving licensees other than those specified in clause 170 e. (1)(A)(i), the aggregate liability for a single nuclear incident of persons indemnified, including the reasonable costs of investigating and settling claims and defending suits for damage, shall not exceed (i) the sum of $500,000,000 together with the amount of financial protection required of the licensee, or (ii) if the amount of financial protection required of the licensee exceeds $60,000,000, such aggregate liability shall not exceed the sum of $560,000,000 or the amount of financial protection required of the licensee, whichever amount is greater. For each calendar year after the year of the enactment of the Price-Anderson Act Amendments Act of 1986, the Commission shall adjust the amounts referred to in this subparagraph to reflect the effect of inflation for the previous calendar year as measured by the annual percentage

change during such previous year in the implicit price deflator for the Gross National Product as published by the United States Department of Commerce.

(C) In the event of a nuclear incident involving damages in excess of [that] *the* amount of aggregate liability, the Congress will thoroughly review the particular incident, *in accordance with the procedures set forth in subsection 170 i.,* and will, *in accordnce with such procedures,* take whatever action is [deemed] necessary [and appropriate to protect the public from the consequences of a disaster of such magnitude: *And provided further,* That with], *including approval of appropriate compensation plans, to compensate the public in full for all public liability claims resulting from a disaster of such magnitude.*

(2) With respect to any nuclear incident occurring outside of the United States to which an agreement of indemnification entered into under the provisions of subsection 170 d. is applicable, such aggregate liability shall not exceed the amount of $100,000,000 together with the amount of financial protection required of the contractor.

f. The Commission *or the Secretary, as appropriate,* is authorized to collect a fee from all persons with whom an indemnification agreement is executed under this section. This fee shall be $30 per year per thousand kilowatts of thermal energy capacity for facilities licensed under section 103: *Provided,* That the Commission *or the Secretary, as appropriate,* is authorized to reduce the fee for such facilities in reasonable relation to increases in financial protection required above a level of $60,000,000. For facilites licensed under section 104, and for construction permits under section 185, the Commission is authorized to reduce the fee set forth above. The Commission shall establish criteria in writing for determination of the fee for facilities licensed under section 104, taking into consideration such factors as (1) the type, size, and location of facility involved, and other factors pertaining to the hazard, and (2) the nature and purpose of the facility. For other licenses, the Commission shall collect such nominal fees as it deems appropriate. No fee under this subsection shall be less than $100 per year.

g. In administering the provisions of this section, the Commission *or the Secretary, as appropriate,* shall use, to the maximum extent practicable, the facilities and services of private insurance organizations, and the Commission *or the Secretary, as appropriate,* may contract to pay a reasonable compensation for such services. Any contract made under the provisons of this subsection may be made without regard to the provisions of section 3709 of the Revised Statutes, as amended, upon a showing by the Commission *or the Secretary, as appropriate,* that advertising is not reasonably practicable and advance payments may be made.

h. The agreement of indemnification may contain such terms as the Commission *or the Secretary, as appropriate,* deems approriate to carry out the purposes of this section. Such agreement shall provide that, when the Commission *or the Secretary, as appropriate,* makes a determination that the United States will probably be required to make indemnity payments under this section, the Commission *or the Secretary, as appropriate,* shall collaborate with any person indiemnified and may approve the payment of any claim

under the agreement of indemnification, appear through the Attorney General on behalf of the person indemnified, take charge of such action, and settle or defend any such action. The Commission *or the Secretary, as appropriate,* shall have final authority on behalf of the United States to settle or approve the settlement of any such claim on a fair and reasonable basis with due regard for the purposes of this Act. Such settlement shall not include expenses in connection with the claim incurred by the person indemnified.

i. *(1)* After any nuclear incident which will probably require payments by the United States under this section [or which will probably result in public liability claims in excess of $560,000,000] *the Secretary or* the Commission, *as appropriate,* shall make a survey of the causes and extent of damage [which shall forthwith be reported to the Joint Committee,] *and shall submit a report forthwith to the Congress,* to the Congressmen of the affected districts, [and] to the Senators of the affected States, and, except for information which would cause serious damage to the national defense of the United States, [all final findings shall be made available] to the public, to the parties involved and to the courts. The Commission [shall report to the Joint Committee by April 1, 1958, and every year thereafter] *and the Secretary shall report annually to the Congress* on the operations under this section.

(2) Upon a determination by a court, pursuant to subsection 170 o., that public liability from a single nuclear incident may exceed the aggregate liability under subsection 170 e., the President of the United States shall, within ninety days after such determination, submit to the Congress—

(A) a report setting forth the causes and extent of damage and the estimated requirements for full, equitable, and efficient compensation and relief of all claimants;

(B) one or more compensation plans, containing a recommendation or recommendations as to the relief to be provided, each of which would provide for full, equitable, and efficient compensation for all valid claims,; and

(C) any additional legislative authorities necessary to implement such compensation plan or plans.

(3) Any compensation plan transmitted to the Congress pursuant to paragraph (2) shall bear an indentification number and shall be transmitted to both Houses of Congress on the same day and to each House while it is in session.

(4) No such compensation plan may be considered approved for purposes of paragaraph 170 e. (1) unless between the date of transmittal and the end of the first period of sixty calendar days of continuous session of Congress after the date on which such action is transmitted to such House, each House of Congress passes a resolution described in paragraph 6 of this subsection.

(5) For the purpose of paragraph 4 of this subsection—

(A) continuity of session is broken only by an adjournment of Congress sine die; and

(B) the days, on which either House is not in session because of an adjournment of more than three days to a day certain are excluded in the computation of the sixty-day calendar period.

(6) (A) This paragraph is enacted by Congress—

(i) As an exercise of the rulemaking power of the Senate and the House of Representatives, respectively, and as such it is deemed a part of the rules of each House, respectively, but applicable only with respect to the procedure to be followed in that House in the case of resolutions described by subparagraph (B) and it supersedes other rules only to the extent that it is inconsistent therewith; and

(ii) with full recognition of the constitutional right of either House to change the rules (so far as relating to the procedure of that House) at any time, in the same manner and to the same extent as in the case of any other rule of the House.

(B) For purposes of this paragraph, the term "resolution" means only a resolution of either House of Congress the matter after the resolving clause of which is as follows: "That the approves the compensation plan numbered submitted to the Congress on 19 ," the first blank space therein being filled with the name of the resolving House and the other blank spaces being appropriately filled; but does not include a resolution which specifies more than one compensation plan.

(C) A resolution once introduced with respect to a compensation plan shall immediately be referred to a committee (and all resolutions with respect to the same compensation plan shall be referred to the same committee) by the President of the Senate or the Speaker of the House of Representatives, as the case may be.

(D)(i) If the committee to which a resolution with respect to a compensation plan has been referred has not reported it at the end of twenty calendar days after its referral, it shall be in order to move either to discharge the committee from further consideration of such resolution or to discharge the committee from further consideration with respect to such compensation plan which has been referred to the committee.

(ii) A motion to discharge may be made only by an individual favoring the resolution, shall be highly privileged (except that it may not be made after the committee has reported a resolution with respect to the same compensation plan), and debate thereon shall be limited to not more than one hour, to be divided equally between those favoring and those opposing the resolution. An amendment to the motion shall not be in order, and it shall not be in order to move to reconsider the vote by which the motion was agreed to or disagreed to.

(iii) If the motion to discharge is agreed to or disagreed to, the motion may not be renewed, nor may another motion to discharge the committee be made with respect to any other resolution with respect to the same compensation plan.

(E)(i) When the committee has reported, or has been discharged from further consideration of, a resolution, it shall be at any time thereafter in order (even though a previous motion to the same effect has been disagreed to) to move to proceed to the consideration of the resolution. The motion shall be highly privileged and shall not be debatable. An amendment to the motion shall not be in order, and it shall not be in order to move to reconsider the vote by which the motion was agreed to or disagreed to.

(ii) Debate on the resolution referred to in clause (i) of this subparagraph shall be limited to not more than ten hours, which shall

be divided equally between those favoring and those opposing such resolution. A motion further to limit debate shall not be debatable. An amendment to, or motion to recommit, the resolution shall not be in order, and it shall not be in order to move to reconsider the vote by which such resolution was agreed to or disagreed to.

(F)(i) Motions to postpone, made with respect to the discharge from committee, or the consideration of a resolution or motions to proceed to the consideration of other business, shall be decided without debate.

(ii) Appeals from the decision of the Chair relating to the application of the rules of the Senate or the House of Representatives, as the case may be, to the procedures relating to a resolution shall be decided without debate.

j. In administering the provisions of this section, the Commission *or the Secretary, as appropriate,* may make contracts in advance of appropriations and incur obligations without regard to section 3679 of the Revised Statutes, as amended.

k. With respect to any license issued pursuant to section 53, 63, 81, 104 a., or 104 c. for the conduct of educational activities to a person found by the Commission to be a nonprofit educational institution, the Commission shall exempt such licensee from the financial protection requirement of subsection 170 a. With respect to licenses issues between August 30, 1954, and August 1, [1987,] *2012,* for which the Commission grants such exemption:

(1) the Commission shall agree to indemnify and hold harmless the licensee and other persons indemnified, as their interests may appear, from public liability in excess of $250,000 arising from nuclear incidents. The aggregate indemnity for all persons indemnified in connection with each nuclear incident shall not exceed $500,000,000, excluding cost of investigating and settling claims and defending suits for damage;

(2) such contracts of indemnification shall cover public liability arising out of or in connection with the licensed activity; and shall include damage to property of persons indemnified, except property which is located at the site of and used in connection with the activity where the nuclear incident occurs; and

(3) such contracts of indemnification, when entered into with a licensee having immunity from public liability because it is a State agency, shall provide also that the Commission shall make payments under the contract on account of activities of the licensee in the same manner and to the same extent as the Commission would be required to do if the licensee were not such a State agency.

Any licensee may waive an exemption to which it is entitled under this subsection. With respect to any production or utilization facility for which a construction permit is issued between August 30, 1954, and August 1, [1987,] *2012,* the requirements of this subsection shall apply to any license issued for such facility subsequent to August 1, [1987.] *2012.*

l. The Commission is authorized until August 1, 1977, to enter into an agreement of indemnification with any person engaged in the design, development, construction, operation, repair, and maintenance or use of the nuclear-powered ship authorized by section

716 of the Merchant Marine Act, 1936, and designated the "nuclear ship Savannah." In any such agreement of indemnification the Commission may require such person to provide and maintain financial protection of such a type and in such amounts as the Commission shall determine to be appropriate to cover public liability arising from a nuclear incident in connection with such design, development, construction, operation, repair, maintenance or use and shall indemnify the person indemnified against such claims above the amount of the financial protection required in the amount of $500,000,000 excluding costs of investigating and settling claims and defending suits for damage in the aggregate for all persons indemnified in connection with each nuclear incident: *Provided*, That this amount of indemnity shall be reduced by the amount that the financial protection required shall exceed $60,000,000.

m. The Commission *or the Secretary, as appropriate,* is authorized to enter into agreements with other indemnitors to establish coordinated procedures for the prompt handling, investigation, and settlement of claims for public liability. The Commission *or the Secretary, as appropriate,* and other indemnitors may make payments to, or for the aid of, claimants for the purpose of providing immediate assistance following a nuclear incident. Any funds appropriated to the Commission *or the Secretary, as appropriate,* shall be available for such payments. Such payments may be made without securing releases, shall not constitute an admission of the liability of any person indemnified or of any indemnitor, and shall operate as a satisfaction to the extent thereof of any final settlement or judgment.

n. (1) With respect to any extraordinary nuclear occurrence to which an insurance policy or contract furnished as proof of financial protection or an indemnity agreement applies and which—

(a) arises out of or results from or occurs in the course of the construction, possession, or operation of a production or utilization facility, or

(b) arises out of or rsults from or occurs in the course of transportation of source material, byproduct material, or special nuclear material to or from a production or utilization facility, or

(c) during the course of the contract activity arises out of or results from the possession, operation, or use by [a Commission] *a Department of Energy* contractor or subcontractor of a device utilizing special nuclear material or byproduct material, *or*

(d) arises out of or results from or occurs in the course of the construction, possession, or operation of any facility licensed under section 53, 63, or 81 of this Act, for which the Commission has imposed as a condition of the license a requirement that the licensee have and maintain financial protection pursuant to subsection 170 a., or

(e) arises out of or results from or occurs in the course of transportation of source material, byproduct material, or special nuclear material to or from any facility licensed under section 53, 63, or 81 of this Act, for which the Commission has imposed as a condition of the license a requirement that the licensee have and maintain financial protection pursuant to subsection 170 a., or

(f) arises out of or results from or occurs in the course of activities undertaken by the Secretary, including activities undertaken by contract, in connection with the storage or disposal of, or research and development on radioactive waste including the transportation of such materials to a storage or disposal site or facility, and the construction and operation of any such site or facility, and the construction and operation of any such site or facility, the Commission *or the Secretary, as appropriate,* may incorporate provisions in indemnity agreements with licensees and contractors under this section, and may require provisions to be incorporated in insurance policies or contracts furnished as proof of financial protection, which waive (i) any issue or defense as to conduct of the claimant or fault of persons indemnified, (ii) any issue or defense as to charitable or governmental immunity, and (iii) any issue or defense based on any statute of limitations if suit is instituted within three years from the date on which the claimant first knew, or reasonably could have known, of his injury or damage and the cause thereof[, but in no event more than twenty years after the date of the nuclear incident]. The waiver of any such issue or defense shall be effective regardless of whether such issue or defense may otherwise be deemed jurisdictional or relating to an element in the cause of action. When so incorporated, such waivers shall be judicially enforceable in accordance with their terms by the claimant against the person indemnified. Such waivers shall not preclude a defense based upon a failure to take reasonable steps to mitigate damages, nor shall such waivers apply to injury or damage to a claimant or to a claimant's property which is intentionally sustained by the claimant or which results from a nuclear incident intentionally and wrongfully caused by the claimant. The waivers authorized in this subsection shall, as to indemnitors, be effective only with respect to those obligations set forth in the insurance policies or the contracts furnished as proof of financial protection and in the indemnity agreements. Such waivers shall not apply to, or prejudice the prosecution or defense of, any claim or portion of a claim which is not within the protection afforded under (i) the terms of insurance policies or contracts furnished as proof of financial protection, or indemnity agreements, and (ii) the limit of liability provisions of subsection 170 e.

(2) With respect to any public liability action arising out of or resulting from an extraodinary nuclear occurrence, the United States district court in the district where the extraordinary nuclear occurrence takes place, or in the case of an extraordinary nuclear occurrence taking place outside the United States, the United States District Court for the District of Columbia, shall have original jurisdiction without regard to the citizenship of any party or the amount in controversy. Upon motion of the defendant or of the Commission *or the Secretary as appropriate,* any such action pending in any State court or United States district court shall be removed or transferred to the United States district court having venue under this subsection. Process of such district court shall be effective throughout the United States.

o. Whenever the United States district court in the district where a nuclear incident occurs, or the United States District Court for the District of Columbia in case of a nuclear incident oc-

curring outside the United States, determines upon the petition of any indemnitor or other interested person that public liability from a single nuclear incident may exceed the limit of liability under subsection 170 e.:

(1) Total payments made by or for all indemnitors as a result of such nuclear incident shall not exceed 15 per centum of such limit of liability without the prior approval of such court;

(2) The court shall not authorize payments in excess of 15 per centum of such limit of liability unless the court determines that such payments are or will be in accordance with a plan of distribution which has been approved by the court or such payments are not likely to prejudice the subsequent adoption and implementation by the court of a plan of distribution pursuant to subparagraph (3) of this subsection (o)[1]; and

(3) The Commission *or the Secretary as appropriate* shall, and any other indemnitor or other interested person may, submit to such district court a plan for the disposition of pending claims and for the distribution of remaining funds available. Such a plan shall include an allocation of appropriate amounts for personal injury claims, property damage claims, and possible latent injury claims which may not be discovered until a later time. Such court shall have all power necessary to approve, disapprove, or modify plans proposed, or to adopt another plan; and to determine the proportionate share of funds available for each claimant. The Commission *or the Secretary as appropriate,* any other indemnitor, and any person indemnified shall be entitled to such orders as may be appropriate to implement and enforce the provisions of this section, including orders limiting the liability of the persons indemnified, orders approving or modifying the plan, orders, staying the payment of claims and the execution of court judgments, orders apportioning the payments to be made to claimants, and orders permitting partial payments to be made before final determination of the total claims. The orders of such court shall be effective throughout the United States and shall include establishment of priorities between claimants and classes of claims, as necessary to insure the most equitable allocation of available funds.

[(4) The Commission shall, within ninety days after a court shall have made such determination, deliver to the Joint Committee a supplement to the report prepared in accordance with subsection 170 i. of this Act setting forth the estimated requirements for full compensation and relief of all claimants, and recommendations as to the relief to be provided.]

p. The Commission [shall submit to the Congress by August 1, 1983, a detailed report] *and the Secretary shall submit to the Congress by August 1, 2008, detailed reports* concerning the need for continuation or modification of the provisions of this section, taking into account the condition of the nuclear industry, availability of private insurance, and the state of knowledge concerning nuclear safety at that time, among other relevant factors, and shall include recommendations as to the repeal or modification of any of the provisions of this section.

q. With respect to any public liability claims resulting from a nuclear incident involving nuclear material that has been illegally diverted from its intended place of confinement or intended transportation route, such claims shall be compensated in accordance with the provisions of this Act, and from the source of funds applicable to the person or Federal agency having title to such nuclear material: Provided, That in the event that the title to such nuclear material cannot be identified, such claims shall be compensated in accordance with the provisions of section 170 d.

r. (1)(A) No court may award exemplary or punitive damages under State law in any action with respect to a nuclear incident against a person on behalf of whom the United States is obligated to make payments under an agreement of indemnification covering such incident.

(B) Subparagraph (A) applies to any nuclear incident or evacuation covered by an agreement of indemnification under—

(i) subsection 170 c. with a licensee of the Commission that is required to maintain less than the maximum amount of financial protection;

(ii) subsection 170 d.; and

(iii) subsection 170 k.

(2) Nothing in this subsection affects the authority of any court to award exemplary or punitive damages under State law in any instance other than an instance subject to paragraph (1).

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